

FEBRUARY, 1960

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Problems of Economics

Selected Articles from Soviet Economics Journals in English Translation

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Demand and Supply Under Socialism

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Problems of Adjusting the Remuneration of Labor of Personnel Employed in Non-Productive Fields

Fundamentals of Labor Law of the USSR and the Constituent Republics:
A Draft

USSR Foreign Trade Indicators

On the Question of the So-Called Income "Revolution" in the USA

PUBLISHED IN THE UNITED STATES BY
INTERNATIONAL ARTS AND SCIENCES PRESS

33 WEST 42nd STREET • NEW YORK 36, N. Y.



Problems of Economics

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PROBLEMS OF ECONOMICS

Selected Articles from Soviet Economics

Journals in English Translation

PROBLEMS OF ECONOMICS is a complete, literal translation, without editorial comment, of articles selected from the following Soviet publications:

VOPROSY EKONOMIKI – PROBLEMS OF ECONOMICS
VESTNIK STATISTIKI – JOURNAL OF STATISTICS
PLANOVOE KHOZIAISTVO – PLANNED ECONOMY
SOTSIALISTICHESKII TRUD – SOCIALIST LABOR
VESTNIK LENINGRADSKOGO UNIVERSITETA, SERIIA EKONOMIKI –
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PROMISHLENNO-EKONOMICHESKAYA GAZETTA - INDUSTRIAL-ECONOMIC
GAZETTE

Articles from other publications are included from time to time if they are considered of sufficient interest for translation.

PROBLEMS OF ECONOMICS is published as a service for purposes of information and education. Twelve issues per year. Subscription rate: \$50.00 per year; \$4.50 per copy; \$20.00 per year to teachers or students associated with subscribing educational institutions. Editor and Publisher: Myron E. Sharpe.

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INTERNATIONAL ARTS AND SCIENCES PRESS

33 West 42nd Street, New York 36, N. Y.

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P. Malyshev:

Differential Land Rent Under Socialism - A Scientific Conference at Moscow University

A scientific conference on the problem of differential land rent under socialism was held in September, 1958, at the Economics Faculty of Moscow State University. The participants in the conference heard and discussed papers by Prof. A. Pashkov, "Differential Land Rent Under Socialism" and Prof. M. Sokolov, "Differential Land Rent and Net Profit Under Socialism."

In the introductory remarks of Prof. N. Tsagolov and the papers and the speeches during the discussion, emphasis was laid on the major theoretical and practical significance of the value of a scientific elaboration of the problem of differential rent under the conditions of socialism. As noted by the participants in the conference, there is as yet no unity of views among Soviet economists with respect to a number of important questions in the area of this problem. This has a negative effect upon the practical solution of problems of socialist management in the field of rent.

The following points of view were expressed with respect to the most important questions of the theory of differential rent and the practical employment thereof by the socialist state.

I. General Prerequisites for Differential Rent Under Socialism

The participants in the conference noted, to begin with, that the general prerequisites (conditions) for the existence of differential land rent do obtain under socialism.

The first prerequisite is the fact that land is finite in area. This concept is a relative one, in the sense that the finiteness of land is greatly dependent upon the social system under which the land is worked.

Socialism substantially expands the boundaries of arable land, as testified to by the experience of the USSR, where 8,920,000 acres of new lands were opened in three years, as well as by the experience of the Chinese People's Republic and other lands of people's democracy. However, under socialism, too, it is impossible completely to overcome the limitations upon the land area, particularly its best sections. Therefore, socialist society is compelled to cultivate not only the best, but also the average and the poorest lands.

The second prerequisite is the retention under socialism of differences in the fertility and the location of various areas of land. Socialism, by improvements in the tools of labor, and in the systems of agriculture, transportation and the like, creates very favorable conditions for transforming the poorest sections into average and superior ones. Despite this fact, the differences we have noted continue to exist under socialism.

The number of general prerequisites for the existence of differential rent has been added to by Prof. A. Pashkov of Moscow University, who adds the existence under socialism

of commodity production and the law of value, whose operation displays a number of special features in agriculture.

II. Economic Reasons for the Existence of Differential Rent Under Socialism

The participants in the conference suggested various economic reasons for the existence of differential rent under socialism.

Prof. A. Pashkov and Assistant Prof. M. Osadko (Moscow University) hold that the reason for its existence is the fact that, along with government enterprises - state farms - the collective farms run independent enterprises on the land available for their use. If all agricultural production were run by the government, i.e., if collective farm property did not exist, and commodity production and the law of value continued to exist, it is obvious that differential rent would not exist under socialism. Marx had this in mind in Volume III of *Capital*, when he spoke of false social value. (1) This situation exists in our extractive industries, where the government possesses the depths of the earth and exploits them itself. Here the property-owner and the manager coincide.

Prof. M. Sokolov, Assistant Prof. A. Bachurin (Moscow University) and Comrade M. Nesmil (The Institute for Financial Research) define the economic cause for the existence of differential rent under socialism as the existence of commodity production and the operation of the law of value.

In the opinion of Assistant Prof. M. Kovaleva (Academy of Social Sciences of the Central Committee of the Communist Party), two conditions, taken jointly, explain the existence of differential rent under socialism: collective farm management of land and the existence of commodity relationships.

Assistant Prof. G. Khudokormov (Moscow University) holds the reason for the existence of differential rent under socialism to be that land differing in fertility and location is utilized by the various collective farms under conditions in which the volume of the best land is limited.

N. Anisimov, Candidate in Economic Sciences (an editor of the journal, *Economics of Agriculture*) noted that the formulation, "rent," as an economic form of realization of agricultural property, does not in itself provide the specific reason for the appearance of differential rent either under capitalism or socialism. Marx and Engels noted that the development of differential rent is not related to the appearance of some form of property in the land, but is a consequence of monopoly of land operation. (2)

Differential rent under socialism is the result of higher labor productivity in the medium and better areas.

Assistant Prof. V. Yagodkin (Moscow University) remarks that a rigorous distinction is needed between extra

income and its social and economic form, as well as between the reason for the formation of differential income and its conversion into rent. Differential rent is not extra income as such, but its economic form or a specific social-and-economic relationship among human beings with respect to this extra income, constituting the result of labor performed under favored natural conditions. The major theoretical difficulty in the problem of differential rent is that of demonstrating how and why the differential extra product is defined economically in the form of rent.

Comrade V. Kirichenko (Moscow University) notes that excess income is the result of the collective farm's employment of the best natural conditions of production. The collective farm's acquisition of this extra income places it under conditions of some inequality from the viewpoint of the conditions of expanded reproduction and participation in the formation of the centralized net income of the state. The socialist state realizes this possibility not as the owner of the land (in the lands of people's democracy public ownership of all the land is not yet in effect), but as the representative of society.

Comrade V. Astakhov (Sotsekgiz) holds that the extra value is appropriated by society in the process of realization of property in the land, which forms income into rent as an economic form of realization of landed property. If it were not for this, our relationships in landed property would have no economic significance, and would remain merely relations of a legal nature.

However, realization of landed property under the conditions of socialism cannot take the form of payment for land, or rental, as no special class of proprietors of the land exists.

III. The Value of Agricultural Produce

The conference paid considerable attention to questions having to do with the formation of the value of agricultural produce. Without clarification of these problems, no solution of the problems of differential rent under socialism is possible. A correct solution of these problems permits the pursuit of a scientifically valid price policy, corresponding to the requirements of the economic laws of socialism.

The problem of formation of the value of agricultural production and of the material foundations of differential rent is related, in the view of Prof. A. Pashkov, to special features of the operation of the law of value in agriculture. According to Marx, these peculiarities consist of the fact that, under capitalism, the value of agricultural products is not determined by the average conditions of production, as is the case in industry, but by the conditions of production in the worst areas. Therefore an extra surplus value comes into being in the medium and better classes of land, and this represents the material foundation of differential rent. An analogous phenomenon exists under socialism. The labor applied in socialist agriculture to the best and average plots yields an extra surplus product, which is realized in the form of differential rent. To hold that the value of agricultural products is determined by the average conditions of production, as do certain Soviet economists, means in fact to deny the existence of differential rent under socialism, because its material foundation — the extra surplus product — is ignored in this situation.

Prof. A. Pashkov warns in his speech against confusing the problem of value and the price of agricultural products, as this may lead to methodologically invalid efforts to derive differential rent from the price policy pursued by the Communist Party and the Soviet government.

The resolution of the June, 1958, Plenum of the CC CPSU

notes the need to establish new procurement prices based on the average zonal conditions of production, the increase in the productivity of labor, the reduction in the cost of production and the development of the essential accumulations for expanded socialist reproduction. However, this resolution did not deal with the matter of how to determine differential rent, but with new procurement prices.

The price of agricultural products depends upon their value. But in determining its level, one cannot proceed purely from the law of value and the law of differential rent. Procurement price policy must be flexible and must take into consideration all the conditions of agricultural production. In addition to outlays of labor, the price of procurement includes the factors of distribution and redistribution of the net income created in agriculture for the needs of society as a whole. It has to provide not only for expanded reproduction in the collective farms, but must stimulate them to an increase in labor productivity and to a reduction in cost of production. Therefore, procurement prices must not and cannot correspond to the cost of agricultural products on the worst lands. Here we must proceed from the average production conditions in the given zone, which have to be taken into consideration in determining the level of procurement prices.

This approach to the situation does not at all signify counterposing to the decisions of the June, 1958, Plenum of the CC CPSU a recognition of the fact that differential rent exists under socialism, and that the value of agricultural products is determined by expenditures of labor on the worst lands.

Why then is it that under socialism, under conditions of planned economy, and with the existence of public ownership of the land, the value of agricultural products is defined as the expenditures of labor not on average, but on the worst lands? In the USSR the land that is general public property is managed not only by government enterprises but by collective farms that invest their labor in the land and cultivate it with their own means of production. The output of collective farms is their own property. The fact that a considerable portion of the land is utilized by collective farms running their independent operations thereon is the reason why society has to make good the expenditures of labor on the worst land. Socialist society cannot get by without utilizing the poorest lands, as the best and medium lands are insufficient to yield the necessary volume of agricultural products.

Prof. M. Sokolov noted in his paper that one cannot elevate the finite nature of land, the presence of marginal lands and the poorest conditions of production into absolute categories. In his opinion, all enterprises in socialist agriculture have good economic conditions, inasmuch as they sell their produce at uniform prices, employ their equipment on equal terms, and have proper organization and systems of labor payment available to them. Therefore, under socialism one must talk chiefly of poor and good work. It was Academician V. Williams who noted that "there are no poor lands, there are only poor operators." To establish purchase prices on the basis of the costs of production of the poorest collective farms, as proposed by certain economists, would not stimulate technical progress in agriculture, as under these conditions the lagging collective farms would in any case derive incomes that would cover their high costs of production. Objectively this would merely result in restraining the development of the poorest farms.

We have no objective reasons to assert, Prof. M. Sokolov noted further, that social costs in industry are defined by the average conditions of production, while in agriculture they are defined by the poorest. Socialist relationships of

production govern both in industry and agriculture; the same economic laws are in effect. Despite the important role played by collective farm property in agriculture, it is socialist and approximates the state form in its development. The labor of the collective farmers is directly social labor, as is that of persons employed in industry. The efforts of some Soviet economists to validate the establishment of prices based on the costs of production in the poorest collective farms leads to an underestimation of the planned socialist economy and to identifying the process of price formation under capitalism and under socialism. The speaker cited the familiar passage in *Capital* in which Marx, speaking of false social value, noted that while it was valid to assert that the prices of agricultural products remain at their former level when differential rent is paid to the capitalist state, "it is false to assert that the value of products will remain the same when capitalist production is replaced by association." (3)

Here Marx notes clearly that price formation of agricultural produce under socialism will not be defined by the costs of production on the worst lands.

Adding a great deal of factual material for the collective farms of Ryazan Oblast, Prof. M. Sokolov concluded that the social costs of production are defined by the conditions of operation of those collective farms that yield the bulk of agricultural produce in a given zone, and not by expenditures under the poorest conditions of production. In so doing the reporter based himself on the proposition in Comrade N. S. Khrushchev's report to the effect that "... in setting prices it is necessary to base ourselves upon the majority of the collective farms and upon the level of development of their economies." (4)

The establishment of separate purchase prices for each zone is, in the opinion of the speaker, related to the fact that the social value of an agricultural product is determined by the actual costs of production not for the country at large, but for the individual specialized zones, where production is approximately identical in nature.

Assistant Prof. A. Bachurin also observed that social value corresponding to the labor outlays of the majority of collective farms comes into being within each zone. This proposition holds both with respect to agriculture and with respect to extractive industry, where the social value is not determined by the highest individual cost under the worst natural conditions of production. Therefore, prices, too, cannot be based on the highest expenditures.

Prof. Z. Atlas (Moscow Institute of Finance) emphasized that under socialism no private monopoly of land ownership exists. Therefore, all lands may be put into production for the purpose of satisfying society's need for agricultural produce. As in the extractive industries, it is necessary when establishing prices in agriculture to base oneself on the enterprises showing average production costs. For those enterprises working the worst lands, it is necessary to provide appropriate compensation in the form of supplements to procurement prices so as to meet their costs of production. These supplements would increase expenditures for the procurement of agricultural commodities, but they would be considerably lower than the sum of all prices if the latter were based on the individual costs on the poorest lands. It is theoretically possible to build the pricing system in terms of the proposals of Prof. A. Pashov. However, this is undesirable, as it would cause the majority of state and collective farms to accumulate financial "fat," which it would be necessary to remove via some financial mechanism.

Assistant Prof. E. Sollertinskaya (Moscow State Institute of Economics) believed it to be untrue that the concept of

determination of value by labor outlays upon the poorest lands falls within the scope of the law of differential rent as such. Marx takes a different approach to this in *Capital* and *Theories of Surplus Value*.

The law of differential rent is not dependent upon the absolute level of value and the prices of farm products. This law is operative when social value is regulated by the conditions of production not on the marginal but on average land, as is presently the case under the conditions of the farm crisis in the USA. Under these conditions, differential rent on the poorest lands becomes a negative magnitude. It is not mere reference to a law, but concrete analysis of the relationships of production under specific conditions that will make it possible to answer the question as to whether the marginal or the average lands determine market value.

Assistant Prof. I. Kozodoev (Moscow University) subjected to critical examination the remarks by Prof. M. Sokolov to the effect that "social costs of production are not arrived at as an arithmetic mean, ... they constitute that which is typical under given conditions of production, ... in 130 collective farms the production cost of a centner of grain was 30 rubles, in another 100 it was 50 rubles, in 20 it was 70 rubles, and in 10, 100 rubles. Under these conditions the typical costs of production will be 50 rubles." If we take the point of view of the reporter and suppose that production expenses of 50 rubles constitute the social costs, then, according to Comrade Kozodoev, the overwhelming majority of the collective farms will receive no differential rent at all. In collective farms whose individual costs of production are relatively high, a negative value will result, and they will not be in a position to cover their costs of production. Under these conditions the receipt of differential rent is the privilege only of the most advanced collective farms, with exceptionally high labor productivity. The reporter's arguments were held to greatly understate the role of differential rent as a stimulus, as he would deprive the majority of collective farms of any. Assistant Prof. I. Kozodoev emphasized the need for a rigid differentiation between the material foundation of rent and the relationships among human beings with respect to this material foundation. This is a most important methodological proposition. The material foundation of differential rent is the excess that comes into being when equal sums are expended upon equal tracts of land, but under different conditions of operation. This is the law of differential rent. It is only in connection with this surplus that differential rent is created.

Prof. Ia. Kumachenko (Moscow University) observed that recognition of average conditions of production as the determining factors represented only a partial denial of differential rent, as the difference in the incomes of the best and the average collective farms is preserved. From this it follows that the value of the agricultural product is determined by socially necessary labor not on the average, but on the worst piece of land.

Comrade V. Pervushin (Novosibirsk Civil Engineering Institute) states that a very wide range of labor productivity will be found in the various branches of our economy. A single product will cost society very greatly differing amounts of labor. As a result, incomes also differ in scale. However, one cannot speak of the existence of differential rent throughout the entire national economy. Differential rent is a special manifestation of differential income.

V. Pervushin casts doubt upon the idea that the value of any given product is established on the scale of the economy as a whole. The problem examined in the present discussion demands the elaboration of many practical questions.

Comrade A. Ovchinnikov (Rostov State Institute for Planning the Uses of Water) holds that inasmuch as the

production of agricultural produce on marginal lands is necessary to society, and the expenditures thereon are socially necessary, prices cannot be lower than the value of the produce obtained on the farms with the poorest land.

Assistant Prof. A. Koshelev (Moscow University) remarked that analysis of the essence of differential rent requires clarification of the different conditions under which social value is shaped under capitalism and socialism.

If there is a decline in the social need for agricultural produce, then what was formerly the best land becomes marginal, and the social value varies accordingly.

Under socialism the problem of differential rent is also related to that of social necessity. It finds reflection in the national economic plan, which reflects the social need for any given product at any particular time. This also determines the amount of socially necessary labor which society must repay in the form of other equivalent use values to the producers who have created the given product. Consequently, in our country, value comes into being as a prearranged, conscious act. However, if we take the expenditures on the poorest land, regardless of society's need for the product, as the basis for determination of value, conscious behavior is eliminated from the process of value formation. The speaker expressed himself in favor of determining the value of any given agricultural product on the basis of the average outlays of labor in the zone where the conditions of production are the worst, relative to other zones. In this case, social value will represent the amount of socially necessary labor that has to be returned in accordance with society's need for that product.

Assistant Prof. M. Kovaleva holds that under socialism the price of agricultural products is regulated not by the price of production on the worst lands, as is the case under capitalism, but by social value, under socially normal conditions of operation on the worst lands. Therefore, differential rent under socialism is the difference between social and individual value. Zonal purchase prices do not express a uniform social value, as they contain an element of extraction of differential rent. The standardized value is reflected in retail prices. We must recognize the real fact that when market prices are determined by the value of the product on the worst lands, differential rent represents a deduction from the working time and income of the consumer. Zonal differentiation of prices reduces this deduction.

Assistant Prof. M. Osadko emphasized that the value of the surplus product in state farms does not take on any special economic form. The negation of rent in the state farms does not signify a negation of the uniformity of operation of the law of value in agriculture, but represents merely a denial of identity between collective and state farms. Recognition of the average conditions of production as those which determine social value means that the collective farms operating under the worst conditions do not receive a normal income even when they manifest the ability to run a rational operation. The concepts of "average" collective farm and "average conditions of production" should not be confused.

Prof. A. Bolgov (Academy of Social Sciences of the Central Committee of the Communist Party) contends that the social value of agricultural products is determined in the final analysis by the productivity of labor on the least fertile of the lands which socialist society has to employ under the socially average conditions of production on such lands. Only this approach enables one to understand why weak collective farms functioning on lands of the same quality and under the same social conditions of production as advanced farms are capable, with improvement in the organization of

their operation, of achieving good production indices and high incomes. Marx shows that preferred and marginal lands will also exist under conditions of improvement in the economic fertility of the soil.

Recognition of the thesis that the social value of agricultural produce is determined by their cost of production on the lands of poorest fertility under socially average conditions of production does not mean that one is rewarding the lagging collective farms. On the contrary, such an approach makes for accumulation and expanded reproduction in virtually all collective farms, and stimulates the utmost development of the social economy of lagging collectives. The unity of our national economy is not due to the existence of a unified social value, but to the unified form of socialist property in the means of production, and the planned organization of the economy. We cannot agree that the law of value reigns in our country. It has to be controlled consciously in the interests of the upbuilding of socialism by taking the specific conditions of production into consideration. This is borne witness to by the steps taken by the Communist Party and the government in recent years in the fields of industry and agriculture.

Comrade V. Astakhov holds that negation of the existence of a standardized value, and its replacement by so-called zonal value, which some seek to employ to negate the regulating role of the law of value, actually means subordinating the zonal economy to the law of value. However, under socialism, the law of value is not the regulator of production, either in terms of a zone or with respect to the entire national economy. Value relations represent, under socialism, one of the forms of manifestation of planned connections and unity of all branches of the national economy. This gives rise to the necessity of having a unified value of products, with respect to which zonal value must be regarded as an individual value. Unified social value may correspond with outlays of labor both under the worst, the average, and the best conditions of production. Everything depends upon the conditions under which the overwhelming bulk of the commodities in this branch of industry have been produced. If we assume that, except for the land, all conditions of production are equal, the socially necessary labor time will be determined by the outlays of labor in the worst lands. Recognition of "average value" leads to a negation of the possibility of expanded reproduction in the collective farms on marginal lands. At the same time, this means an understatement of the volume of the national income, as under these circumstances a portion of the outlay of labor is eliminated from the estimation of value. The need to take into account the outlays of labor on the worst lands as socially necessary, under conditions of commodity relationships, is an economic law.

Assistant Prof. V. Iagodkin observed that if value is to be determined on the basis of average conditions of production this will negate not the law of differential rent, but the law of value as an objective law determining socially necessary expenditures of labor. When one speaks of determining the value of agricultural produce by the expenditures of labor on marginal lands, one thinks not of backward farms but of collective farms of average operation, i.e., the majority of collective farms. This is in complete agreement with Marx's definition of socially necessary working time, when he emphasizes "the skill and intensity of labor that is average for the given society." It was specifically the average level of operation that Comrade N. S. Khrushchev had in mind when he said that: "In setting new prices we must base ourselves neither on the most advanced nor on the most backward collective farms, but on the majority; on the collective farms showing average production indices." (5)

Assistant Prof. G. Khudokormov (Moscow University) pointed out that the socially necessary expenditures of labor upon the production of agricultural produce in the collective farms are determined by the relatively poorest conditions of production (natural soil fertility, climatic conditions and location of farms relative to the points of delivery of the produce). The average procurement prices for collective farm produce established in accordance with the decision of the June, 1958, Plenum of the CC CPSU proceed in their entirety from consideration of the given conditions of formation of the social value of agricultural products.

Prof. N. Tsagolov (Moscow University), speaking of the formation of the value of farm produce, emphasized the need for a more precise definition of the concept of marginal land. It should be defined as the land of poorest fertility when equal expenditures are made on all land. Therefore one cannot speak of converting the poorest land to the best without considering productive expenditures. Inasmuch as we have an insufficiency of the best lands in terms of meeting the effective demand of the population for farm products, average and marginal lands have to be placed under cultivation. Therefore the socially necessary expenditures which go to create value must be recognized as the expenditures in the collective farms working the relatively poorest lands. Determination of value in terms of average lands means violation of the law of distribution in accordance with labor and of incentive to collective farmers working on the relatively poorest lands.

IV. Sphere of Operation of the Law of Differential Rent Under Socialism

The Conference revealed three essential positions on the matter of the sphere of operation of the law of differential rent.

Partisans of the first position hold that the law of differential rent functions only in the collective farm sector of production. Thus, Comrade Pervushin asserted that only in the collective farms does the special situation arise that may be described, within definite limits, as differential rent, whereas in state enterprises differential incomes are completely at the disposal of society as a whole, without taking on the form of rent. Therefore, direct fulfillment of the law of distribution in accordance with labor is impossible in the collective farms.

Comrades Kozodoev and Osadko hold that, in its social and economic content, differential rent under socialism represents a special relationship of production between the state and the collective farms with respect to the production and distribution of the differential extra product (income). It is only this content that renders differential rent a social-and-economic category, an economic law.

Assistant Prof. G. Rudenko (Moscow University) pointed out that rent is a social relationship between the owner of the land and its actual user, a relationship arising on the foundation of separation of land ownership from agricultural production. When this separation does not exist, no rental relationship exists. In the light of these considerations it becomes clear that no rental relationship exists in the relationships between the state and the state farms, as the land owner and the producer are, in this situation, one and the same.

Partisans of the second position hold to the opinion that the law of differential rent operates in socialist agriculture as a whole. This opinion is shared by Comrades Pashkov, Sokolov, Nesmii, Ovchinnikov and others.

Prof. A. Pashkov explains the existence of differential rent in state farms by the fact that negation thereof would

be equivalent to the incorrect conception that a completely different law of formation of the value of agricultural products operates in the state sector of the economy than in the collective-farm sector. Therefore, the opinion, now widespread, to the effect that differential rents exist only in the collective farm sector, is outdated and requires reexamination.

Prof. M. Sokolov holds that, due to the lower individual costs existing therein, advanced state farms gain an added profit, permanent in nature. It takes on the form of differential rent, although formal in nature.

Prof. N. Tsagolov noted that in analyzing the production of differential incomes one should not drag in the question of the two forms of socialist property. The foundation for the formation of differential incomes is commodity production and the operation of the law of value, which provide adequate basis for explaining the appearance of differential incomes both in the collective and state farms. However, in the distribution of differential incomes, the two forms of socialist property are involved, and they determine the specific nature of the relationships of distribution of differential incomes in the collective farms, state farms and extractive industry.

A number of participants in the conference hold that the law of differential rent is operative not only in agriculture but in the extractive industry. This point of view is characteristic of Comrades Bachurin, Astakhov and others. They hold that it is necessary to differentiate between the social relationships arising in connection with the formation and distribution of differential rents in the collective farms and in state enterprises. These relationships are not identical, due to the differences between the two forms of property. However, within the state sector too, the objective need arises to plan and distribute differential income. The objective need for the formation of differential rent and proper distribution thereof, with due consideration for the general interests of the state, exists, for example, in the petroleum, ore mining and lumber industries. In state socialist enterprises it is economically desirable to distinguish the formation of extra net income arising as the result of the more productive labor of the workers from differential income (rent) arising as the result of advantages in the natural conditions of production.

V. Distribution and Utilization of Differential Rent

Many participants in the conference paid attention to the correct theoretical and practical solution of the problems of distribution of differential rent, as this is directly related to the matter of strengthening the alliance between the working class and the collective farm peasantry and of stimulating the development of socialist production.

Two major conceptions were noted on the matter of distribution of differential rent under socialism:

(1) that the entire mass of the rent created should be acquired by the state and employed for the needs of the people as a whole;

(2) that the mass of the rent should be distributed in definite proportions between the state and the collectives that produced it.

There is also a modification of the second conception, constituting the point of view that all the differential rent in category I should be appropriated by the state, and all the differential rent in category II should be appropriated by the state and the collective farms in proportion to their outlays.

Docent E. Sollertinskaia dealt at length with the question of which form of appropriation of this rent most fully

corresponds to the principles of socialism. Socialism is equality, but equality in the sense of abolition of classes, in the sense of an equal relationship to the means of production. In order for collective farmers working on the marginal and the best lands to be in an equal relationship thereto, the excess product obtained as the result of exceptional yield in terms of the labor expended has to be transferred to the state. Only transfer of this rent to the state can place the people involved in a position of equality relative to the means of production. Lenin's words: "The nationalization of the land is the transfer of rent to the government," remain completely valid under socialism. Some comrades regard the transfer of rent to the state as hardly better than exploitation of the collective farmers, as the rent was created by their labor. Of course, the rent is created by the labor of the collective farmers, but only thanks to the higher productivity on the best lands, which are the property not of the collective farm but of the people as a whole.

Rent is an economic form of realizing the right of land ownership. If the collective farms appropriate it themselves, this means that they constitute the real owners of the land. If this were the case, the law on nationalization of the land would become a purely legal concept, having no economic content. However, this is untrue. The nationalization of the land is realized, in economic terms, by the appropriation of rent by the state, which eliminates the monopoly of private or group property in the land and the appropriation of the rent by the monopolists.

The fact that practical politics play a role in the matter of appropriation of rent is another matter. In its policy, the state, while taking due consideration of the principles of socialism and basing its activities thereon, may at various periods acquire a greater or lesser volume of rent, leaving a portion thereof to the collective farms to accelerate the progress of production, and so forth. In principle, however, the rent belongs to the people, as it is the people that own the land.

Comrade Nesmii holds that rent, under the conditions of socialism, is the property of the people as a whole, but that it does not follow that all rent must necessarily pass through the state budget. A portion may be used for the general public benefit without passing through the budget. The job is to see to it that the portion of the rent remaining in the collective farms is employed purely as net income and is assigned to the construction of boarding schools, roads, etc. If this is done, the rent remaining in the hands of the collective farms will be used in the general interests of the country.

Prof. A. Pashkov holds it to be incorrect that all category I differential rent has to go to the state. Were this undertaken as a practical project, it might have most serious consequences. For example, the land in the Kuban is twice as fertile as that east of the Volga or in certain other regions of the country. If the conception in question were followed, half the harvest of the Kuban would have to be confiscated by the state without payment. Persons holding this position leave out of consideration many aspects of the problem at issue. The collective farms and farmers in the suburbs of Moscow receive considerably higher incomes than those of distant regions of the country who do not have available so close and large a market as Moscow. According to the conception at issue, one would have to confiscate the entire difference in income from the collective farmers of the Moscow area. But this ignores the significance of the principle of material incentive to the collective farms and collective farmers in the results of their labor. The inclusion of this proposition in the second

edition of the textbook, *Political Economy*, greatly furthered the dissemination of this incorrect viewpoint.

A correct principle would be one under which a portion of the differential rent in category I and in category II would go to the state, and a portion to the collective farms and their members. The share of the state in differential rent I has to be greater than its share in differential rent II. In the development of differential rent I, the state itself plays a very major role, as it provides the collective farms with first-class equipment and trains the personnel of agriculture. Therefore the government obtains a portion of this rent. Current practices in the planning of taxes and procurement prices for farm products proceed from the principle that a portion of the differential rent will go to the government, and a portion will remain with the collective farms and farmers.

Prof. M. Sokolov also holds that differential rent should go in part to the state, and in part to the collective farms for further expansion of production and improvement in the material status of the collective farmers. The differential rent created in the state farms may be taken over in its entirety by the state, as it is the owner of all state farm production. At the same time, a portion of the rent may be left to the state farms to strengthen their economies.

Assistant Prof. A. Bachurin holds that in order for all collective and state farms to be placed in a position of equality, all differential rent I must be taken over by the state, subsequent to which a portion thereof would be returned to the collective farms in the form of expenditures upon the construction of irrigation systems, roads, etc. Differential rent II must, to a considerable degree, remain in the hands of the state and collective farms, so as to provide a material stimulus to the struggle to increase capital investments in the land for the purpose of improvement of its qualities. The system whereby the bulk of the differential rent is placed at the disposal of the state through the mechanism of zonal prices is more advanced than that of levying a special tax for rent. However, measures are necessary to improve the distribution of the incomes of the collective farms, including differential rent. Many collective farms which have high incomes allocate inadequate portions thereof to their indivisible funds, do little in the way of capital construction, and raise payments to labor, all of which has a negative effect in terms of stimulating output per person. It is necessary to establish inter-collective farm funds to assist any farms which suffer from natural calamities, or have low incomes due to other natural causes.

Professors Ia. Kumachenko and A. Bolgov hold that differential rent in category I should be acquired by the state. Category II is created by the joint efforts of the collective farms and the government and must therefore be distributed among them in accordance with their expenditure.

The speeches of Comrades Bachurin, Atlas and others drew attention to the need for a scientific elaboration of cadastres, i.e., a detailed description of agricultural land by quality. The properties of each section might be evaluated in terms of the differential income it provides as a result, specifically, of whether it is average, good, or the very best of land. An accounting of the property of lands and comparative evaluation thereof is necessary in order to solve such problems of the national economy as current and long-range planning, planning of systems of agriculture, and the fixing of prices for farm produce.

Others who spoke at the conference included Assistant Professors A. Libkind (Moscow Institute of Economic Statistics), A. Belousova and V. Fedorov, Candidate in Economic Sciences V. Korochkin, graduate students A.

Yemelyanov, E. Murtazin, and V. Osadin (Moscow University).

Only two of the speakers (of more than 30) categorically rejected the concept that differential rent exists under socialism. Prof. A. Gurevich (ME and MO Institute) declared that to hold that the category of differential rent exists under the conditions of gradual transition from socialism to communism is far-fetched and constitutes a mechanical transfer of the economic categories of capitalism to our conditions.

E. Koretskaia, a graduate student at Moscow University, based her denial of the existence of differential rent under socialism on the fact that socialism has eliminated the monopoly in land ownership by private individuals and that the exploitation of man by man has been done away with.

The participants in the conference did not uphold these views and subjected them to criticism.

"Negation of differential rent under socialism," said Prof. A. Pashkov in conclusion, "contributes nothing either to the theory or the practice of socialist management. The arguments of the comrades who deny the existence of differential rent under socialism are not valid. The same types of arguments were employed by certain economists as far back as the 20's in denying the operation of the law of

value and certain other categories of commodity production. This type of argument can only side-track us away from any profound study of the pressing problems of socialist management."

In closing the conference, Prof. N. Tsagolov expressed the hope that it had contributed to a further, deeper and multi-faceted study of the problem of differential rent under socialism and of the practical problems involved in the building of communism.

Literature Cited

(1) See Karl Marx, Capital, Vol. III, 1949, pp. 674-675 (Russian edition).

(2) See V. I. Lenin, Collected Works, Vol. 5, p. 105 (Russian edition).

(3) See Karl Marx, Capital, Vol. III, 1949, p. 674.

(4) N. S. Khrushchev, Report to the First Session of the USSR Supreme Soviet, pp. 41-42.

(5) Materials of the June (1958) Plenum of the CC CPSU, pp. 38-39).

S. Partigul:

Demand and Supply Under Socialism *

Circulation as a stage in the process of social reproduction reflects the main distinctive features inherent in a given mode of production. Thus, the anarchy of production inherent in capitalism is manifested in the anarchy of circulation; overproduction crises appear as marketing crises. Under socialism the balanced, proportional development of production determines the planned development of circulation as well.

The proportions formed in the process of production determine the proportions in the sphere of circulation, specifically, the proportions between demand and supply. Circulation covers the movement of both the means of production and consumer goods. It goes without saying that the circulation of the means of production has its own distinctive features and essentially differs from the circulation of consumer goods. Similarly, the proportions between the demand for the means of production and their supply are shaped differently than the proportions between the demand for consumer goods and their production and supply. The present article examines the problem of demand for consumer goods and their supply. In the given case demand is understood as effective savings, i.e., the money incomes of the population which (except savings, payment for services, taxes, etc.) can be used for the purchase of goods of personal consumption; supply is understood to mean the mass of commodities going for sale to the population.

The volume of effective demand of the population and the supply of goods and their correlation in the final analysis are determined by the distribution of the national income.

The economic laws operating under capitalism confine the incomes of the bulk of the population to quite rigid bounds: the value of the means of subsistence necessary for the reproduction of labor power. At the same time the tendency to increase production, particularly of consumer goods, is inherent in capitalism. Hence the disproportion, characteristic of capitalism, between the supply of goods and the limited effective demand. In the process of redistribution of the national income the share of the working people is further reduced. The main methods of redistributing the national income are taxes, monopoly prices of goods, and inflation. High prices of services (public utilities, transport, medical service, etc.) are also factors in such a redistribution. In the United States, for example, payments for services in the non-productive sphere comprise over 30% of all the personal expenses of the population.

The disproportion between supply and demand under capitalism by no means signifies a permanent crisis in the sale of goods. The antagonistic contradiction between demand and supply is manifested strongest of all in the main phase of the cycle, during the crisis. In the other phases, first of all in the phase of upswing, an absolute growth of incomes and a corresponding absolute expansion of demand occurs (the number of workers engaged in the economy increases, the demand of the population in the middle and high-income groups rises, etc.). But in the period between the starting points of two cycles the contradictions between demand and supply become ever sharper.

* For purposes of discussion.

The concrete proportions between demand and supply in conditions of capitalism are determined by a number of factors, of which the decisive ones are the level and pattern of consumption of different groups of the population. According to statistics of sample studies of the expenditures of urban families in the United States, depending on the level of income, the groups with the lowest incomes (no higher than 2,000 dollars a year per family) in 1950 spent 36-37% of their budgets on food, while the higher groups (over 10,000 dollars a year) spent 24-25%. Moreover, the actual food expenses differed greatly. The per capita food expenses in groups with an income of 10,000 dollars and higher were nearly 90% greater than in groups with an income of less than 2,000 dollars a year. Groups with incomes of under 2,000 dollars spent approximately 25% of their budget for rent. The higher groups spent many times more for clothing than the lower groups; still greater are the differences in expenditures for household goods, furniture, amusements, etc.

Capitalist production "adapts" itself by its own methods to the limited demand of the population and to changes in the pattern of consumption. One of the forms of such "adaptation" is the mass production of cheap goods of lower quality. Thus, pure woollen fabrics are produced in relatively small quantities to meet the demand of groups with high incomes. At the same time "woollen" fabrics are put out which contain only a small percentage of wool. Another example is the way margarine replaces butter in the consumption of the bulk of the population. In Britain the annual consumption of butter per capita amounted to 9.2 kilograms and margarine to 4.5 kilograms in 1934-1938; in 1955, the annual per capita consumption of butter declined to 6.5 kilograms, while the consumption of margarine rose to 8.3 kilograms. The production and sale of all kinds of substitutes is growing steadily in the capitalist countries. Goods of lower quality are sold at cheaper prices than full quality goods and this assures bigger sales. At the same time the lower price exceeds the value of these goods, which gives the capitalists additional profits. The manufacture of new types of goods, particularly from synthetic materials, has become widespread in recent years. Their social value is below that of old types of goods, and this creates the possibility of bigger sales. But the price of those goods is much higher than their value, which assures the monopolies huge profits. The cheaper goods of lower quality, just as the new articles, enjoy a bigger demand only for a certain period. The limited bounds of the effective demand make themselves felt before very long and the disproportion between demand and supply is recreated on a new, wider basis.

Technical progress gives rise to new requirements. The production and sale of TV sets, automobiles, refrigerator washing machines, etc. has grown rapidly in recent years. Those durable goods now hold a substantial place in the retail trade of the principal capitalist countries. In the United States their share in total retail trade was 27% in 1939, 37% in 1950 and 34% in 1957. The demand for these goods appears mainly in groups of the population with

higher incomes. Of interest in this respect is the following table, giving the distribution of TV sets and household

appliances among French families (see *The Economic Position of Western Europe*, Inoizdat, 1958, p. 139):

	Appliances per 1,000 dwellings in December 1954			
	Farm laborers	Workers	Office employees	People of the liberal professions and high officials
Electric refrigerators	5	29	89	378
Kitchen electric ranges	6	9	20	107
Washing machines	18	85	67	234
TV sets	—	9	13	47

It goes without saying that refrigerators, TV sets and similar goods are being bought by people in the middle-income group and to some extent even in the low-income group. But in such cases the purchase of new articles restricts the demand for other goods, which in the final analysis also aggravates the problem of marketing. The basic contradictions of capitalism, thus, are reflected in the relationship between demand and supply.

In a socialist society the problem of demand and supply is also directly bound up with the distribution of the national income, but the essence of this problem is different in principle. The laws which limit the wages of workers as well as the incomes of other groups of the working people to the value of the means of subsistence necessary for the reproduction of labor power lose their force. As the national income grows, the consumption fund rises steadily. In its material composition the consumption fund consists of material goods used for the satisfaction of the personal requirements of the members of society. At the same time it represents a definite sum of values expressed in the form of money. The main part of the consumption fund is distributed among the members of the socialist society in the form of money incomes. Under socialism the substance of the problem of demand and supply consists first of all in that the volume of the money incomes of the people should conform to the available resources of consumer goods. Members of the socialist society, receiving incomes in the form of money (wages, pensions, cash payments to collective farmers for their workday units, etc.), gain the right to buy a quantity of material things of corresponding value. The volume of the consumption fund is determined in the final analysis by the mass of material wealth which the population receives; the circulation of money merely serves the movement of material values. It follows from this that in a socialist society there must be conformity between the money incomes of the population and the value of the mass of commodities assigned for sale to the population. If there is no such conformity and the value of goods is smaller than the total money incomes, this means that part of the money incomes cannot be realized and that the consumption fund is actually smaller than was expected (proceeding from the money incomes of the population). If the production of consumer goods expands faster than the money incomes of the population, the expression of the consumption fund in terms of money must be brought into conformity with its material elements. This is achieved through raising the real incomes of the population (an increase in nominal wages and other money incomes of the working people, price reductions, etc.).

The proportional development of all branches of the

national economy is an indispensable condition for the achievement of conformity between demand and supply. Temporary disturbances of proportions between branches of the economy, the lag of one or another branch result in partial disproportions in circulation. Thus, the development of capital construction without due account of the consumption fund leads to a situation in which necessary quantities of consumer goods cannot be matched against the additional money incomes of the population (specifically the larger total wages of builders). The lag of agriculture in the postwar period (up to 1953) seriously affected the correlation of the demand for, and supply of, foodstuffs, especially animal-husbandry products. The correlation of demand and supply is indissolubly bound up with money circulation. If the demand exceeds the supply, if the supply of goods does not match the mass of money, the threat of decline in the purchasing power of the ruble arises, interruptions in trade result, etc.

It should be borne in mind that the demand may not coincide with the supply in time, or in territory. For example, the available mass of commodities may be distributed over the country's territory without due account of the demand in various districts; the assortment of goods may not fully meet the requirements of the population. Of decisive importance in eliminating such discrepancies is an improvement in the organization of industrial production and trade, taking constant account of the rising requirements of the population, the specific features of the demand in different areas, in different seasons, etc. At the same time the use of economic levers, the price system in the first place, is of great importance in achieving conformity between demand and supply.

Full conformity between the commodity resources going for sale and the money incomes of the population is of prime significance for the development of the socialist economy. This is particularly important for the application of the socialist principle of distribution in accordance with work done.

In this connection it is necessary to dwell on the view, which was widespread until recently in our literature, that the growth of consumption (the purchasing power) of the people under socialism must always run ahead of production. This proposition is untenable both theoretically and from the standpoint of economic practice. The above formula means that the volume of production constantly lags behind the purchasing power of the people. The purchasing power of the masses is determined above all by the wages and other incomes which the working people receive from society. Wages and other incomes are a certificate for obtaining a definite quantity of consumer goods in conformity

with the quantity and quality of work performed. If the production of consumer goods lags behind the demand, the money received by the working people cannot be exchanged for the material values they need. This means a decline in real wages. Upsetting of the conformity between demand and supply also disorganizes money circulation. The existence of a surplus of money, against which there is no corresponding mass of commodities, is fraught with the danger of inflation. If the surplus money exists constantly (and this invariably follows from the contention that the rise in the purchasing power of the people runs ahead of the growth of production at all times), then the drop in the purchasing power of the ruble is inevitable. Lastly, disturbance of the proportion between demand and supply disorganizes commodity circulation, creates interruptions in trade, shortages of goods, which affect the living standard of the population.

The advantages of a socialist economy, the planned operation of the economy, makes it possible to establish correct proportions between demand and supply, preventing the formation of surplus money in circulation, of inflation. In an interview granted to the American journalists Ridder and Ludicke, Comrade N. S. Khrushchev said: "There can be no inflation in our country, because when the budget and production plans are drawn up account is taken of the amount of money which will be issued to the population in the form of wages, the quantities of goods which will have to be manufactured to balance the amount of money with the produced quantity of goods, and so on. Thus, in our socialist economy inflation can occur only as a result of wrong calculation in drawing up the plans, in other words, it is precluded."

Let us examine some of the regularities which determine the proportions between demand and supply under socialism.

The incomes of the population used for the purchase of goods (effective demand) comprise only a part of the consumption fund. It includes, in addition, incomes which do not assume the form of money and are not realized in the sphere of circulation (products received by collective farmers on account of their workday units, the consumed products obtained in the personal plots of collective farmers and factory and office workers, the free provision of material wealth to the population at the expense of the state — food in hospitals and other forms of material consumption in the social and cultural spheres). Part of the money income of the population goes for the payment of services provided by the non-productive sphere. Thus, the volume of the effective demand depends on what share of the national income goes for personal consumption outside the sphere of circulation, and what share is taken up in the budget of the population by payments for services.

The income in kind of factory and office workers from their personal plots comprises, for the country as a whole, approximately 5-6% of their total incomes. In the case of peasants, the income in kind they receive from the collective farms and from their personal plots in the primary distribution of the national income still makes up the major part of their incomes. But in the process of reproduction a considerable part of these incomes assumes the form of money (during the sale of farm produce to trading organizations and at collective-farm markets). The sale of products at the collective-farm markets in itself does not increase the effective demand of the population and does not mean a redistribution of the national income. Such a redistribution takes place only if the prices on the collective-farm market exceed the value of the commodities. But collective-farm trade substantially changes the structure of the consumer demand. The urban population,

in buying products at the collective-farm market, thereby presents a smaller demand for the same products sold in the state trading network. On the other hand, the money received by the collective farmers for the produce they sell at the market is used primarily for the purchase of manufactured goods.

In the final analysis, after the sale by collective farmers of their surplus produce, their income in kind comprises only about one-third of their total income. This share will systematically shrink, first, in view of the growth of the money incomes of the collective farms and the change-over to monetary remuneration for the work of the collective farmers, and second, in view of the gradual decline in the importance of personal plots as collective-farm production grows.

One of the distinct features of the distribution of the national income under socialism is that the non-productive sphere is maintained chiefly at the expense of the state, with most of the services being rendered to the population free of charge (education, public health services, raising of skills, etc.). In the USSR rents are much lower than in capitalist countries: expenses for rent make up only 4-5% of the budget of the Soviet worker. The cost of transportation services, theatre and cinema tickets, etc., is also low in our country.

As the material and cultural standards of the members of socialist society advance, actual expenses on various services will rise, since the population will make wider use of various public utility and other services, go more often to the theatre, cinema, etc. But since the money incomes of the working people will grow and the state will spend more for social and cultural needs, the share of payments for services will not increase noticeably in the total expenses of the population. Thus, the bulk of the money incomes will continue to be used for the purchase of goods in the trading network.

To establish conformity between the effective demand and supply our planning system uses such an important instrument as the balance sheet of the money incomes and expenses of the population. The income side of the balance sheet reflects all the incomes of the population, both primary (wages, incomes from collective farms, from the sale of farm produce to the state, etc.), and secondary (pensions, allowances, stipends, etc.). The expenditure side shows the payments into the financial system, payments for services, savings, etc. As a result the effective demand of the population is established and a corresponding quantity of goods must be put up to meet it.

In the process of socialist reproduction the proportions between demand and supply change constantly. These changes take place on the basis of an increase in commodity resources and a rise in the money incomes of the population. The correlation between the purchasing fund of the population and the quantity of goods designated for sale in the trading network does not always shape up as envisaged in the plan. For example, in the process of socialist reproduction the actual incomes of the population at times exceed the planned estimates. In such cases the state takes measures to expand the output of consumer goods and increase retail sales.

Deposits of the population in savings banks and the commodity stocks of goods in the retail network play a large part in regulating proportions between demand and supply.

The money incomes of the population deposited in savings banks reduce the demand for consumer goods. On the other hand, the accumulation of savings itself largely depends on the state of trade. The sum of deposits is determined specifically by such major factors as the stability

of the ruble and the availability of sufficient stocks of goods in the trading network. The interdependence between the stability of the currency, the dynamics of retail prices and the savings of the population, specifically deposits in savings banks, is indisputable. Stability of currency, stability of prices, and especially their systematic reduction, create additional stimuli for saving, with the money being kept primarily in savings banks. There is also a direct connection between commodity stocks in trade and the deposits of the population in savings banks. Current savings of the population are usually designated for the purchase of goods in a period when the consumer needs them (for example, seasonal goods), for the accumulation of money to buy

relatively expensive goods, etc. These savings are of a more or less stable nature and are deposited in savings banks when the trading network is provided with goods and the population is confident that its requirements for goods will be satisfied. If there is no such confidence, if there are not enough goods in the trading network, there arises a desire among the population to use its savings for buying goods as quickly as possible. In these conditions savings are of an unstable nature; they remain primarily in the hands of the people in the form of money and less is deposited in savings banks. Of interest in this respect is an analysis of the following data (in billion rubles):

	1940	1953	1955	1956	1957	1958
Deposits in savings banks (at the end of the year)	7.3	38.6	53.7	63.7	80.6	87.2
Increase in savings deposits during the year	—	12.2	5.3	10.0	16.9	6.6
Commodity stocks in retail trade (at the end of the year)	16.4	94.3	98.9	119.4	123.2	148.0
Commodity stocks (in days of turnover)	34	83	77	80	74	83

The figures show that at present trading organizations are better provided with goods than before the Great Patriotic War. At the end of 1940 commodity stocks in all links of retail trade (at wholesale warehouses, warehouses at department stores and shops, including stocks of a seasonal nature kept in remote districts) amounted only to the sales of 34 days. Such stocks were obviously inadequate and led to interruptions in trade. In those conditions deposits in savings banks were small and increased very slowly: in 1939-1940 the average annual increase was only 600 million rubles.

In 1953-1957 the stocks of goods in the trading network amounted to 74-83 days of turnover. Such a volume of commodity stocks, as shown by experience, approximately conforms to the requirements of retail trade. Larger stocks of goods and a reduction of prices with a systematic rise in the money incomes of the population are the major factors which determined the growth of savings bank deposits in recent years.

Commodity stocks will continue to increase in the future as well. This is determined, first, by the fact that as the volume of trade grows, even if the turnover remains the same, the actual commodity stocks should increase. The second factor is the change in the structure of commodity circulation. The turnover of foodstuffs is approximately 35-45 days and of goods other than food, 120-125 days. The turnover of goods of a complex assortment is even slower. That is why as the assortment of goods is extended and the share of goods, other than food, especially of a complex assortment (clothing, footwear, etc.) and durable goods, rises, the general turnover period of commodities will slow down. But in practice the growth of commodity stocks is not always determined by the objective requirements of trade. In a number of cases the accumulation of commodity stocks is a result of serious shortcomings in the organization of production and trade. If industry produces goods in limited demand, if the trading network distributes the goods

improperly, commodity stocks are accumulated over and above the set standards. The accumulation of considerable stocks may also be the result of incorrect correlation of prices of various goods. Thus, every disturbance of the necessary proportions between demand and supply affects the dynamics and structure of commodity stocks.

The problem of correlation of demand and supply does not simply boil down to a conformity of the total volume of commodity funds to the purchasing fund of the population. For the uninterrupted sale of goods, conformity between the demand for, and supply of, individual goods is necessary.

As pointed out earlier, the structure of production of consumer goods and consumer demand is changing constantly, with these changes proceeding in one direction: there is an increase in the share of highly nutritive foodstuffs (meat, butter, milk, sugar, fruit, etc.) in the total volume of output and consumption of foodstuffs. This tendency has been particularly pronounced in recent years. Between 1940 and 1958 total sales of foodstuffs to the population increased 2.2-fold, with the sales of meat, milk and dairy products rising more than 4-fold, butter nearly 4-fold and sugar 3.6-fold. The output and consumption of goods other than food has grown even faster than that of foodstuffs: the sales of goods other than food increased 3.6-fold between 1940 and 1958. The manufacture and sale of household goods and articles that meet cultural requirements have been expanding at a fast rate.

In the socialist society the structure of the demand by all groups of the population is changing systematically. At the same time the intensity and nature of these changes are not the same for different groups. Thus, as a result of an increase in wages of the low-paid factory and office workers and of higher pensions, the pattern of consumption of these groups has changed sharply. For example, their demand for high-quality foods, especially animal-husbandry products and also some manufactured goods, has risen substantially.

The structure of demand is also changing in view of the change in the relationship between the urban and rural population. As the urban population grows, there is a greater demand for farm produce sold in the retail network, and also for goods other than food bought primarily by city dwellers. At the same time the levels and patterns of consumption of the urban and rural population are drawing closer together. The countrywide now accounts for 36% of all sales of clocks and watches, about 40% of the wireless sets, about 50% of the sewing machines and over 50% of the bicycles.

The achievement of conformity between the demand for, and supply of, some goods often entails certain difficulties. Difficulties arise mostly in meeting the demand for new goods. The demand for such goods grows very rapidly, while the organization of their production on a large scale demands considerable time (the building of new factories, mastery of new machinery and technological processes, etc.). For example, in 1949-1950 the supply of TV and wireless sets, new watches, bicycles and sewing machines fell considerably short of the demand. But a few years later the situation changed radically: The output of TV sets jumped from several thousand in 1950 to one million in 1958, of wireless sets from one million to 3.9 million, and of clocks and watches from 7.6 million to 25 million. During these years the mass production of refrigerators, washing machines, vacuum cleaners and other goods in great demand was organized. But for some of these items the demand is still not satisfied fully and a further expansion of their output is needed.

As a result of the steep advance of agriculture and the rise in the incomes of collective farmers, their demand for building materials has risen sharply. This demand is so far not being met adequately, notwithstanding the fact that in the period of 1950-1958 sales of timber, cement and other materials to the population rose by 8-9 times. In the current seven-year period it is planned to increase the sale of prefabricated houses to the population 10-fold, cement 3-fold, felt roofing 2.2-fold and window glass 1.6-fold. Such an expansion in sales will make it possible to establish conformity between the demand for building materials and their supply. A certain disproportion now exists between the demand for furniture and its supply. In view of the sharp expansion in housing construction, the demand for furniture has risen steeply, but it is not yet satisfied fully.

There can also be a discrepancy between the demand for and supply of goods in daily use. This discrepancy is also removed first of all through the expansion of output. As pointed out earlier, the rise in the incomes of the population, especially of the low-paid factory and office workers, has brought about a sharp rise in the demand for high-quality animal-husbandry products. Thanks to the advance of agriculture, the steady increase in the output of animal-husbandry products, the demand for them is being satisfied more and more fully. In this connection mention should be made of the great importance of maximum use of local sources for increasing commodity supplies. In conformity with the decision of the Plenary Session of the Central Committee of the Communist Party of the Soviet Union in January 1955, a direct relation has been established between the expansion of agricultural production in a given area, territory or republic and the supplies available to the population. This system has justified itself and has proved to be an important factor in increasing output.

It must be said that industrial and trading establishments do not always take into account the consumer demand. Thus, clothing and knitted goods are now produced in sufficient quantities, but the consumer is not always able to buy a

suit, dress or other article of the design, pattern or size he needs. The removal of such discrepancies calls for an improvement in the work of the trading network and industry. The practice of trading establishments placing orders with industrial enterprises should be extended. The responsibility of industrial enterprises for the output of goods conforming to the requirements of the Soviet consumer should be enhanced.

Of exceptional importance is the question of organizing the manufacture of goods designed to meet the needs of consumers with different levels of income. This is not only a technical and organizational problems but an economic one as well. In the present conditions when the level of incomes of different groups of the working people is not the same, industry must produce all types of consumer goods in wide assortments and of different prices so that the consumer will be able to choose the type and grade of goods he needs in accordance with his income. Industry has great possibilities for doing so.

With the expansion of the output of different articles and a reduction in their costs, the prerequisites are created for lowering their prices. Price reductions, as one of the primary conditions for increasing real incomes of the working people, in many cases serve simultaneously as a factor for establishing conformity between the greater supply of one or another item and the insufficient demand for it. The reduction of prices of some items as their production increases has been widely practiced in recent years. Thus, the greater production of pork made it possible to cut prices of pork and smoked ham by 15-20% at the end of 1957. This facilitated a large rise in purchases by the population and eliminated the surplus stocks of these products in the trading network. Prices of TV sets, radios, clocks and watches, aluminum dishes and other goods have been reduced several times in recent years. In all cases the cut in prices helped establish the necessary proportions between demand and supply and eliminated the surplus stocks of goods in trade. The latest reduction of prices (as of July 1, 1959) of a number of goods, particularly watches, is highly indicative in this respect. The production of wrist watches rose from 1.5 million in 1950 to 8 million in 1955 and 13 million in 1958. At the level of prices prevailing prior to July 1, 1959, sales of wrist watches lagged behind the expansion of their output. The reduction of prices by 19%, and for many types of wrist watches by 25-30%, stimulated demand greatly. The same is true of other goods, the prices of which were cut. The annual saving of the population on the latest price reduction will amount to 6 billion rubles.

The reduction of prices to achieve proper proportions between demand and supply does not at all mean that prices in our country are determined only by the relationship between demand and supply. In a socialist society state retail prices of consumer goods are set in a planned way, taking into account the expenditure of social labor in their production. The objective basis for a cut in prices is first of all a reduction in value, i.e., a cut in the socially necessary labor in the production of various goods. But the planned setting of prices, with account of the operation of the law of value, does not preclude the deviations of prices of some goods from their value. Thus, the state sets higher prices for alcoholic beverages with the object of limiting their consumption. On the other hand, lower prices are set for many goods, for example, children's clothing, medicines, etc.

The Soviet economy does not know spontaneous fluctuations of prices depending on fluctuations of the demand and

(Continued on Page 29)

D. Oparin:

Quantitative Relationships in the Models of Expanded Reproduction

This article has the objective of presenting the quantitative relationships in Marx's model of expanded reproduction, so that these relationships may be taken into

consideration when preparing extended national economic balance sheets.

Marx's Model for Capitalist Society*

Total		1st Year					
		I.	4,400	c +	1,100	v +	1,100 m = 6,600
	II.	1,600	c +	800	v +	800	m = 3,200
		6,000	c +	1,900	v +	1,900	m = 9,800
Total		2nd Year					
		I.	4,840	c +	1,210	v +	1,210 m = 7,260
	II.	1,760	c +	880	v +	880	m = 3,520
		6,600	c +	2,090	v +	2,090	m = 10,780
Total		3rd Year					
		I.	5,324	c +	1,331	v +	1,331 m = 7,986
	II.	1,936	c +	968	v +	968	m = 3,872
		7,260	c +	2,299	v +	2,299	m = 11,858
Total		4th Year					
		I.	5,856	c +	1,464	v +	1,464 m = 8,784
	II.	2,129	c +	1,065	v +	1,065	m = 4,259
		7,985	c +	2,529	v +	2,529	m = 13,043
Total		5th Year					
		I.	6,442	c +	1,610	v +	1,610 m = 9,662
	II.	2,342	c +	1,172	v +	1,172	m = 4,686
		8,784	c +	2,782	v +	2,782	m = 14,348

* See K. Marx, *Capital*, Volume II, 1954, pp. 513-515 (Russian edition). We are citing the data for all the five years, but without the initial data of the scheme of extended accumulation, which Marx derived from a reconstructed simple reproduction scheme.

In the above model the first line (I) of each year shows the production of means of production, the second line (II) shows the production of articles of consumption. The value of the aggregate product in each line is made up of: c — input of constant capital (means of production), v — input of variable capital (articles consumed by workers), and m — surplus value. The first part (c) is expended in the production process, the second (v) goes to pay for the workers' labor and is spent by the workers for buying consumers' goods, the third part (m) is put at the capitalists' disposal. In plotting the model for expanded reproduction Marx proceeds deliberately from simplified assumptions at first:

(1) the model depicts the general picture of a smooth development of the national economy and of stable ratios in it (i.e., all breakdowns, crises, depressions, etc. are excluded);

(2) the prices of goods remain unchanged in all periods (i.e., the values of the categories cited are expressed in monetary units of stable purchasing power);

(3) in the course of the year the capital undergoes one production turnover, as it were (the production process takes place but once);

(4) the constant capital is fully spent in the course of one production process (i.e., within a year);

(5) the expenses and consumption involved in the sphere of services are not considered separately, the entire society is divided into production workers and capitalists only;

(6) the model does not make any division within the spheres of production (agriculture, industry, etc.).

Marx examines the balance ratios of the numerical values of national economic categories on the basis of his analysis which, first and foremost, dealt with the distribution of surplus value.

Distribution in the Second Period of the Surplus Value Created in the First Period

	Subdivision I		Subdivision II	
	in units	ratios	in units	ratios
For capitalists' consumption	550	50%	560	70%
For accumulation	550	50%	240	30%
Total	1,100	100%	800	100%
From the accumulated part the following went into the increase of:				
constant capital	440	4 parts	160	2 parts
variable capital	110	1 part	80	1 part
Total	550	5 parts	240	3 parts

Of the surplus value created in the first production process (first year) in subdivision I (1,100 units), 50% goes for the capitalists' consumption in the next year, and 50% goes into production accumulation. The latter part of surplus value permits an increase, in the second production period, of inputs of means of production of subdivision I by 440 units, and an increase in inputs of articles of consumption of the same subdivision by 110 units, in accordance with the organic structure of capital of this subdivision, characterized by the ratio: $c : v = 4 : 1$. The distribution of surplus value in subdivision II is quite different. Of the surplus value created here (800 units) 70% goes for the capitalists' consumption in the next period, and 30% for accumulation. Out of this part of accumulation 160 units go into increasing inputs in means of production and 80 units go into increasing the workers' consumption (in accordance with the organic structure of capital of this subdivision, where $c : v = 2 : 1$).

The exchange between the subdivisions in kind proceeds in the following manner. Subdivision I creates in the first period means of production amounting to 6,600 units. 4,840 units of these will be expended in the second production period in the production process of the given subdivision, and 1,760 units will be sold to subdivision II. At the same time subdivision II, having created consumers' goods equal to a sum of 3,200 units, will sell to subdivision I goods equal to a sum of 1,210 units for workers' consumption and a sum of 550 units for the consumption of capitalists of subdivision I, i.e., a sum of 1,760 units in all. Lastly, subdivision I creates in the entire national economy means of production equal to a sum of 6,600 units in the first production period, and it is this quantity that is consumed in the second period. In the same manner, articles of consumption are created in the first period equal to a sum of 3,200 units, and they are consumed in the second period (2,090 units by workers and 1,110 units by capitalists).

Marx's Model as Applied to Socialist Society

Maintaining the general numerical values and principal assumptions of Marx's models, we shall introduce terms that correspond to relations of production under socialism. Naturally, in a socialist society the production process involves both the inputs of means of production into the production process (we shall designate these as m.p.) and the inputs of labor. There is no capitalist appropriation under socialist conditions. Labor is expended either for satisfying the needs of the workers themselves (c.w. — consumption

by workers), or to be used by society in non-productive spheres (c.s. — consumption by society), or to be accumulated for subsequent expanded reproduction (a. — accumulation). Of course, the replacement of capitalist consumption by consumption in the socialist society's non-productive sphere does not by any means fully characterize nor disclose the essence of the historical process involved in the transformation of the capitalist structure into the socialist structure. Such a conditional substitution is designed to preserve all the principal dimensions and ratios of the numerical values of Marx's categories which we shall use subsequently for building extended national economic models, with this serving as proof of the possibility of building such models in principle. At the same time, in order to bring it closer to reality, we do not subdivide the whole model into individual production processes coinciding with periods (where each process is unique, as it were, and the new process starts in the following period only after the foregoing one is over), but we subdivide it into production time-periods (years) in which a multitude of production processes are performed within each period (some are being started, others go on, and still others are being completed). It is this kind of model (corresponding to reality) which is to be employed in the actual statistical determination of the dimensions of the various national economic categories for the corresponding period. Each year involves not only the input of means of production and articles of workers' consumption, but also of means for maintaining the non-productive sphere and for accumulation in the form of an increase in the volume of the existing fixed and circulating funds. Thus, the relationships between the increased quantitative values of all national economic categories in the next production period depend on the accumulations made in the foregoing period.

The numerical values of Marx's models are retained in the models cited below, with but the following modification: the last group has been subdivided into two parts — article of social consumption (consumed in the given period) and accumulation which goes into expanded production and comprises that part of the surplus product which exceeds the consumption of material wealth in the given production period. (See table on following page.)

It may appear that in these models the division of the surplus product into consumption by society and accumulation is done on the basis of ratios differing from those of Marx. Thus, in subdivision I the surplus product of 1,100 units is divided not into 550 and 550 units, but into 500 and 600 units while that in subdivision II is divided not into 560 and 240

		1st Year				
Total	I.	4,400 m.p.	+ 1,100 c.w.	+ 500 c.s.	+ 600 a.	= 6,600
	II.	1,600 m.p.	+ 800 c.w.	+ 509 c.s.	+ 291 a.	= 3,200
		6,000 m.p.	+ 1,900 c.w.	+ 1,009 c.s.	+ 891 a.	= 9,800
		2nd Year				
Total	I.	4,840 m.p.	+ 1,210 c.w.	+ 550 c.s.	+ 660 a.	= 7,260
	II.	1,760 m.p.	+ 880 c.w.	+ 560 c.s.	+ 320 a.	= 3,520
		6,600 m.p.	+ 2,090 c.w.	+ 1,100 c.s.	+ 980 a.	= 10,780
		3rd Year				
Total	I.	5,324 m.p.	+ 1,331 c.w.	+ 605 c.s.	+ 726 a.	= 7,986
	II.	1,936 m.p.	+ 968 c.w.	+ 1,221 c.s.	+ 1,078 a.	= 11,858
		7,260 m.p.	+ 2,299 c.w.	+ 1,221 c.s.	+ 1,078 a.	= 11,858
		4th Year				
Total	I.	5,856 m.p.	+ 1,464 c.w.	+ 665 c.s.	+ 799 a.	= 8,784
	II.	2,129 m.p.	+ 1,065 c.w.	+ 678 c.s.	+ 387 a.	= 4,259
		7,985 m.p.	+ 2,529 c.w.	+ 1,343 c.s.	+ 1,186 a.	= 13,043
		5th Year				
Total	I.	6,442 m.p.	+ 1,610 c.w.	+ 732 c.s.	+ 878 a.	= 9,662
	II.	2,342 m.p.	+ 1,172 c.w.	+ 746 c.s.	+ 426 a.	= 4,686
		8,784 m.p.	+ 2,782 c.w.	+ 1,478 c.s.	+ 1,304 a.	= 14,348

units, but into 509 and 291 units. Such a division follows from the ratios involved in the distribution of the consumed and accumulated portions of the surplus product in the present period and not in the future. The data for the following production period show the same figures of social consumption which were taken by Marx for non-workers' consumption — 550 units for subdivision I and 560 for subdivision II. The numerical value of these categories (as the model shows) increases in the second period, as compared with the first, by 50 units for subdivision I and by 51 units for subdivision II, i.e., by the volume of the increased (as compared with Marx's figures) accumulation in the first period ($600 - 550 = 50$; $291 - 240 = 51$). It is precisely in this way that the replacement of intermittent processes in periods by continuously functioning production should be reflected. This has resulted in the numerical values of the chief categories of Marx's models being preserved unchanged and fully balanced throughout all production periods both for each subdivision and for the national economy as a whole.

If, for the sake of simplicity, we first examine consumption by workers and non-productive consumption by the whole society in each period as a sum total, then all the elements of the aggregate social product may be subdivided into the three following main parts:

- (1) inputs of means of production in the course of the given production period;
- (2) consumption of consumers' goods by production workers and their use by society; and
- (3) the part of the surplus product (in excess of the total consumption of both parts) which goes for accumulation, i.e., for the expansion of production in the next production period (see table shown on the following page).

In the first year a total of 8,909 units was expended in production and consumption, and 9,800 units were created; thus material accumulation amounted to 891 units, which increased consumption in the next year. Actually the inputs of means of production and articles of consumption in the second year were not 8,909 units any more, but 891 units more than this, i.e., 9,800 units in all. In the second production period characterized by increased expenditures,

production was again increased and 10,780 units were produced, i.e., 980 units were accumulated. This accumulation was directed into production expansion in the third year, when the productive consumption and personal consumption amounted to 10,780 units. In the third year 1,078 units were accumulated and 11,858 units produced, etc. Such a coordination of magnitudes in the models under examination is to be observed both in the total dimensions and as regards the individual subdivisions. The surplus product of each subdivision, which goes into accumulation, correspondingly increases the inputs for this group in the following production period. Thus the inputs of means of production in the second year amounted to 6,600 units, whereas in the first year they were 6,000 units. Consequently, the inputs of means of production increased by 600 units, which corresponds to their material accumulation in the first production period. A similar picture is to be observed in all other years, as well as in the distribution of articles of personal and social consumption ($2,909 + 291 = 3,200$, etc.). Such an increase of means of production and articles of consumption in the subdivisions is in full conformity with the organic structure of the production funds. Thus, for instance, in subdivision I it equals 4:1, and the increase from the first to the second year also amounts to $440:110 = 4:1$. A similar conformity is to be observed in subdivision II as well. Here the ratio is 2:1 and the increase of the quantitative values of the corresponding categories follows the same ratio — $160:80 = 2:1$.

Graphic Expression of a Complex Model

In order to give a more visual idea of the national economic relationships we shall express them graphically with due consideration for a number of complicating assumptions (see illustration on page 19). (1)

The four three-dimensional columns depicted form a graphic balance system: national property at the beginning of the period (column I) plus the aggregate social product produced in this period (column II) are equal to the sum total of the annual material inputs (column III) and to the national property at the beginning of the new period (column

A Model of Socialist Expanded Reproduction

	Means of production (m.p.)	Articles of personal and social consumption (a.p.)	Accumulation (a.)	Gross output (g.o.)
<u>1st Year</u>				
I. Means of production	4,400	1,600	600	6,600
II. Articles of consumption	1,600	1,309	291	3,200
Total	6,000	2,909	891	9,800
<u>2nd Year</u>				
I. Means of production	4,840	1,760	660	7,260
II. Articles of consumption	1,760	1,440	320	3,520
Total	6,600	3,200	980	10,780
<u>3rd Year</u>				
I. Means of production	5,324	1,936	726	7,986
II. Articles of consumption	1,936	1,584	352	3,872
Total	7,260	3,520	1,078	11,858
<u>4th Year</u>				
I. Means of production	5,856	2,129	799	8,784
II. Articles of consumption	2,129	1,743	387	4,259
Total	7,985	3,872	1,186	13,043
<u>5th Year</u>				
I. Means of production	6,442	2,342	878	9,662
II. Articles of consumption	2,342	1,918	426	4,686
Total	8,784	4,260	1,304	14,348

I). The figures themselves are graphically plotted so that they must necessarily balance: the "aggregate social product" column is plotted over the top plane of the "national property at the beginning of the period" column, the total material inputs column is plotted from the top level of the "aggregate product" column, and the "national property at the beginning of the new period" column is built up from the bottom level of the "inputs" column. The balance may be expressed in relief form if we shift the columns together, thus forming two equal figures, each consisting of two unequal parts.

The main numerical values of the graphic model here shown may be presented in a small table (shown below).

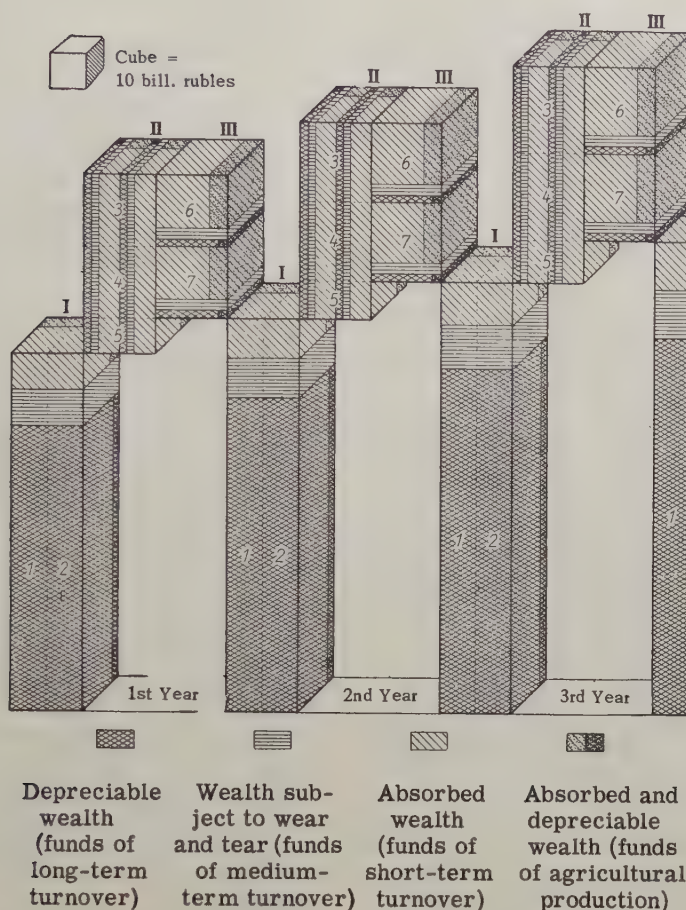
The aggregate social product is composed of the following two parts: material inputs in the production process

proper (cube 3 which equals cube 6), and the national income (cube 4 plus cube 5). The latter represents personal and social consumption on the one hand (cube 4 which is equal to cube 7), and the material accumulation (cube 5) which increases national property due to the production process, on the other. In our diagram the production inputs of material values (cube 6 which is equal to cube 3) cover 40% of the entire aggregate social product, while the national income covers 60%. The national income, in its turn, is composed of national (personal and social) consumption and of material accumulation, based on the ratio of 2/3 : 1/3. In other words, national consumption in the first period amounts to 80 billion rubles (cube 7 which is equal to cube 4), while material accumulation amounts to 40 billion rubles (cube 5).

Schematic Relationships of Main Categories (in billions of rubles)

Periods (years)	National property at beginning of period	Aggregate social product (50% of col. 1)	Parts of Aggregate Product		Parts of national income	
			Material production inputs (40% of col. 2)	National income (60% of col. 2)	Personal and social consumption (2/3 of col. 4)	Material accumulation (1/3 of col. 4)
0	1	2	3	4	5	6
1st	400	200	80.0	120.0	80.0	40.0
2nd	440	220	88.0	132.0	88.0	44.0
3rd	484	242	96.8	145.2	96.8	48.4

National Economic Model of Expanded Reproduction and Consumption
of Material Wealth (in billion rubles)



Numerical Designations

I — composition of material wealth (national property):

- (1) means of production
- (2) articles of consumption

II — aggregate product (gross output):

- (3) compensation for inputs of means of production
- (4) compensation for inputs of articles of compensation

(5) material accumulation (material increase)

(4+5) national income

III — Inputs of material wealth in production and consumption:

(6) inputs of means of production

(7) inputs of articles of consumption (both personal and social).

Material accumulation determines the rate of growth of the national income and national property. Depending on this, it must cover a certain share of the national income. Our model envisions a 10% increase of the numerical values for all categories. Since national property at the beginning of the first production period is equal to 400 billion rubles, the 10% increase can take place with a material accumulation of 40 billion rubles. As the national income is established to be 30% of the national property at the beginning of the production period (i.e., in the first period it is 120 billion rubles), the accumulated part of the national income must amount to 1/3 of it.

In those cases in which the national property in the form of basic production funds, as well as of housing funds, is used more intensively, the ratios between the national income, its accumulated part and the national property may

undergo considerable changes. The national income, even if the magnitude of the national property remains constant, may increase, thus resulting in a decrease of the share of accumulation.

The ratios of numerical values of the categories cited may be presented and planned by the formula $K = B \times C$, where K is the rate of growth of the national economy, B — the accumulated share of the national income, C — the ratio of national income of national property. Thus, in our model $1/10 = 1/3 \times 3/10$, because the rate of growth of the national economy (and of the national property, in particular), according to the scheme cited, amounts to 10% (1/10), the accumulated part of the national income to 1/3, and the national income relative to the national property amounts to 30% (3/10).

Besides giving a division into means of production and

articles of consumption, the diagram also provides for the subdivision of all national economic categories according to the rate of turnover of resources, on the one hand, and according to the two spheres of the national economy (agriculture in the broad sense of the word and industry together with building construction), on the other. The costs and output of transport, trade, etc., are included in the categories of the two spheres presented. All values are strictly balanced, forming an integrated, proportionally developing system of national economy. In this system, both as regards the national property and stocks, as well as the inputs of production and consumption goods, each category has a strictly conditioned numerical value determined by the accepted ratios and the rates of development of the national economy. Thus, for instance (see chart) the stock of absorbed wealth (i.e., the funds of short-term turnover) is relatively insignificant, whereas it holds first place both in inputs and output. On the contrary, the basic funds (with a long term of turnover) prevail in the national property, both in the sphere of production and in that of consumption.

If the rate of turnover for the different kinds of means of production and articles of consumption is known, output may be planned by the following formula: $A(n + k) = P$, where the stocks of the relevant kinds of goods at the beginning of the production period are expressed by the letter A, the annual number of their turnovers by the letter n, the annual rate of growth of the stocks by the letter k, and the annual output figure by the letter P. According to our scheme the output of goods of long-term turnover in the first production period will be determined by the formula: $320 \times (0.05 + 0.10) = 48$, where 320 presents the stocks of these goods at the beginning of the production period, 0.05 the annual turnover rate with a 5% depreciation in the course of the year, and 0.10 the annual rate of growth of the stocks (10%) in conformity with the similar growth rate of the entire national economy.

The model presented, which envisions the preservation of constant value ratios, serves only as a point of departure. With a concrete analysis it is essential to trace, drawing on factual data, the actual movement of the various groups of commodities. The output of instruments of labor, mineral fuel, and all kinds of power must grow at the fastest rates. This results in the immense growth of the output of the machine-building and metal-working industries (the current seven-year plan of the USSR envisions an approximate doubling of their output), in the high rates of growth of all heavy industry (however, this rate is lower than that of the growth of machine-building, as the weight of machines of the same output capacity decreases as a result of technical progress). At the same time, a considerable reduction in the prices of machines per unit of capacity may be expected. The rate of growth in the output of industrial means of production will also exceed the average rate, if we exclude the products of live nature which are used in production. It is also essential to disclose the chief tendencies in the dynamics of agricultural output and in the alterations of prices for farm produce, as compared to the movement of the in-kind and cost indices for industrial production. There should be still more elaborate and detailed models to reflect a correct picture of reproduction in the national economy both of material wealth and of labor, as well as of the circulation of monetary resources, the movement of prices for individual groups of commodities, etc. However, all this does not exclude the existence of tendencies towards preserving the value relationships of the chief elements in the models of expanded reproduction for the national economy.

Principal Conclusions

Drawing on Marx's models and their further development, certain economic conclusions may be drawn as regards the planned, proportional development of the socialist economy:

(1) In correlating the numerical values of categories in a static condition in a nation-wide model, the calculation should be in value terms at current prices, and if the calculation is done for a dynamic situation it should be in monetary units of constant purchasing power, i.e., at a stable price level, as Marx did in his models. The calculations and correlations in monetary units of constant purchasing power should be done by dividing the magnitudes in monetary terms (in current prices) by correctly prepared price indices.

(2) The general movement of the chief economic magnitudes in value (monetary) terms in Marx's models takes place on the basis of relative (10%) and not absolute increases (as some economists assume). (2) It is the relative indices of growth (3) that are known to be the chief foundations for mapping long-term plans for the development of the socialist economy. Of course, this does not preclude the great importance to be attached to the absolute growth figures for various economic values.

(3) A special place in the development of the national economy is held by that part of the surplus product which goes into material accumulation. It increases the production and consumption funds in the course of the given production period. In the following period, due to the increase of funds, the reproduction of wealth takes place on an enlarged scale.

(4) The relationships between national property, national income, their rates of growth and the coefficient of accumulation are interconnected in a particular way, stemming from the relationships expressed by the formula $(K = B \times C)$ cited above. This provides the possibility for a planned determination of the values according to the relationship given.

(5) The division of the social product into means of production and articles of consumption in the model of expanded reproduction is of paramount importance. The first group, in turn, should be subdivided into means and objects of labor, and the second into articles of personal and social consumption. The division into products of industrial and agricultural output stems from the particular features involved in the labor processes in these spheres of production. Subsequently, such spheres of production activities as transport, communications and trade, subdivided into still smaller groups, may be singled out. The establishment of exact coefficients for all these subdivisions provides the possibility of planning them accurately for the future.

The subdivision of material goods according to the periods of their turnover is of considerable importance for establishing proportional relationships between the groups of goods in inputs, output, and the property fund. The proportional relationships between the individual groups can be planned only if their rates of turnover are known. And if the latter are known, then the volume of output can be correctly planned according to the formula $A(n + k) = P$ suggested above.

Literature Cited

(1) See our articles in the following journals: *Statistische Praxis*, Berlin, 1956, Nos. 10, 11, 12; *Revista de Statistica*, Bucuresti, 1957, No. 6; *Bulleten Tekhniko-*
(Continued on Page 29)

A. Smirnov:

Provision for Differences Between Prices and Values in Compiling the Balance Sheet for the National Economy

An article by G. Sorokin, entitled "Problems of Providing for Differences Between Prices and Values in Compiling the Balance Sheet for the National Economy" was carried in *Vestnik Statistiki*, No. 2, 1959. This article posed questions of both theoretical and practical significance. It noted correctly that "the relationship between accumulation and consumption, the relative proportions among branches of the economy, the relationship between Departments I and II, etc., are characterized by different indices depending upon whether they are calculated in current prices or in value." The article emphasizes that knowledge of this type of deviation makes it possible to determine the dimensions and direction of the processes of redistribution under way, to plan these processes in a rational way, to correctly compile and analyze the planned and actual balance sheets of the economy, to introduce corrections into current prices, etc.

Comrade Sorokin prefaced his practical suggestions on methods of preparing a balance sheet for the national economy by a number of theoretical remarks, particularly with respect to the principles of distributing the value of the surplus product among the branches of the national economy. He came to the conclusion that determination of the value of a product requires the addition to production costs of the surplus product, with the latter distributed among the branches of the national economy in proportion to wage funds.

Comrade Sorokin's article did not touch upon what we believe to be the most important theoretical question, representing the point of departure in solving practical problems of compiling a balance sheet for the national economy in terms of value and in current prices — the question of the relationship to value of current prices throughout the national economy, in the departments of social production and the branches of the national economy. The solution of this initial theoretical question will determine the final balance, the over-all value of the surplus product and its distribution among the subdivisions of social production, and the branches of the economy.

In 1957-1958, the journals *Voprosy Ekonomiki* and *Planovoe Khoziaistvo* carried a discussion on the operation of the law of value and price formation under the conditions of the socialist economy of the USSR. Differing viewpoints appeared with regard to the fundamental theoretical problem referred to above. The overwhelming majority of participants in the discussion hold that the general level of current prices for the over-all mass of means of production tends to be under their total value, while the general level of current prices for consumer goods does reflect their total value. From this viewpoint, the sum of prices in the national economy as a whole is less than the sum of values by the degree to which the prices of means of production are below their values. Another group of economists, who also hold that prices for the total mass of means of production are below their values, believe that the prices of consumer goods are above their values, and that these two sets

of deviations balance each other out. From this, one arrives at the conclusion that the total of prices in the economy as a whole is equal to the total value of the products produced.

Along with these major viewpoints, others were also expressed:

(a) that prices of means of production understate their values and that prices of consumer goods overstate theirs, but that they do not balance out, so that there is an inequality between the sum of prices and the sum of values in the economy as a whole;

(b) the sum of prices of means of production is equal to the sum of their values, and prices for the total mass of consumer goods are higher than their value, so that the sum of prices in the economy as a whole exceeds the sum of values.

Let us illustrate the method suggested by Comrade Sorokin for preparing a balance sheet for the national economy in current prices and in value in its most general form: employing schemes for reproducing the total social product in the departments of social production.

Let us assume that the mass and structure of value for the national economy as a whole and for the departments of social production has the following form:

Reproduction Table No. 1
(In Value)

I.	1000c	+	500v	+	500m	=	2000
II.	600c	+	300v	+	300m	=	1200
	1600c	+	800v	+	800m	=	3200

Let us further assume that current prices of the products of Department I are 30% under their values, and the prices of the products in Department II are equal to their values (the point of view of the majority of economists). In this situation, the reproduction table in current prices would take on the following form:

Reproduction Table No. 2
(In Prices)

I.	700c	+	500v	+	200m	=	1400
II.	420c	+	300v	+	480m	=	1200
	1120c	+	800v	+	680m	=	2600

Thus, the deviation of prices from values is 600 in the final total for Department I. Comparison of these two reproduction schemes shows the following major trends stemming from the deviation of prices from values (see table on following page).

	Prices	Values	Deviation of prices from values
1. Material expenditures and depreciation charges (c)	1120	1600	-480
2. National income (v+m) including:	1480	1600	-120
(a) consumption fund	1200	1200	0
(b) accumulation fund	280	400	-120
3. Surplus product (m) including:	680	800	-120
(a) in Department I	200	500	-300
(b) in Department II	480	300	+180

Thus, to set the prices of means of production below their values while holding the prices of consumer goods approximately at their values, without dealing with consumer income levels and estimates of the consumption fund, causes understatement of material expenditures and amortization (of both fixed and circulating capital), of the national income, the net income and the capital accumulation, relative to value.

In compiling the tables of reproduction presented above, it was assumed that the value of output was known. In reality this is the unknown, and what are known are only the current prices, on the basis of which the balance sheet of the national economy both in current prices and in value must then be compiled.

In order to proceed from current prices to value, Comrade Sorokin recommends that the entire surplus product, comprising profit and turnover tax, be redistributed among the branches in which the national income is created, in proportion to wage funds, and that it be added to production costs. (1)

Let us examine the application of this method to our arbitrary example (Table 2) in which production is given in current prices. If we distribute the value of the surplus product, realized in prices, between the departments in proportion to the wage funds, we obtain:

Reproduction Table No. 3

	Values	Prices	Deviation of prices from values (+)
I. $700c + 500v + 425m =$	1625	1400	-225
II. $420c + 300v + 255m =$	975	1200	+225
$1120c + 800v + 680m =$	2600	2600	0

If we compare the Reproduction Tables 3 and 1, it will not be difficult to note that transition from current prices to values by the method suggested by Comrade Sorokin does not yield the real value of output in the respective departments. Thus, the prices of output in Department II, which are taken as being equal to their values, have emerged considerably higher than their values, although in the given instance this deviation lacks any economic foundation whatever. It would doubtless be an error to introduce corrections to current prices on this basis. Nor has the true value of material expenditures (c) been discovered, and

consequently, of production costs, which remain at their previous level of estimation in current prices. As a result, the capital accumulation fund is also exaggerated at 505 units (1625-1120), whereas in our initial table of reproduction based on value it was 400, and in current prices 280 units.

Consequently, if the theoretical proposition is correct to the effect that current prices of the total output of Department I are understatements of value, and that the general price level of the total output of Department II is equal to value, the method suggested by Comrade Sorokin to derive value from current prices is invalid. This method does not take into consideration the fact that when the relationships between prices and values are those which we have assumed, a portion of the surplus product and of the national income fail altogether to acquire an expression in value. This pertains primarily to the accumulated portion of the means of production, to the output of Department I employed within this department at prices below its value, and also to that portion of the output which, at prices which are below value, goes to meet social needs in the non-productive sphere (defense, construction of non-productive structures etc.). It goes without saying that this type of "loss" of a portion of the national income and of the value of the surplus product (or, to be more precise, underestimation thereof) is completely compensated for by a corresponding reduction in capital expenditures, outlays upon increase in circulating capital, etc. This is illustrated by Reproduction Tables 1 and 2, where current prices understate the national income and, correspondingly, the surplus product, by 120 units relative to their value. In this situation, the expenditures for building up the capital accumulation fund are also underestimated by 120 units.

On the other hand, the net income realized in Department II is 480 units, whereas the surplus product created in this department is equal to only 300 units in value. The difference of 180 units of net income represents a portion of the value of the surplus product created in Department I, and shifted to Department II through the economic mechanism of consumption of means of production.

It follows from all the foregoing that the method of proceeding from current prices to values must proceed from the initial theoretical proposition to the effect that current prices correspond with values in the national economy as a whole, in the departments of social production and the branches of the economy. If the prices of consumer goods are, on the whole, equal to their values, and the prices of means of production are, on the whole, lower than their values, in order to arrive at values from current prices it is necessary that we determine the total value of the

surplus product, including the portion that is not reflected in current prices due to the fact that the prices of means of production have been set below their values.

In order to determine the total value of the surplus product, it is necessary to provide auxiliary tables for calculation in which all production of material goods is classified in at least the following three economic groups:

(1) Branches of material production in which prices are set lower than values and in which the surplus product underestimated in the price cannot find monetary expression in other branches of the national economy (arms manufacture, construction in the non-productive sphere, production of equipment and materials for the non-productive sphere, production of means of production for the

manufacture of further means of production, etc.).

(2) Branches of material production in which prices are set lower than values, but in which the underestimated value of the surplus product acquires monetary expression in subsequent spheres of production (agriculture, the production of means of production for consumer goods manufacture, etc.).

(3) Branches of material production, procurement, etc., in which prices provide for the creation of net income in two forms: profit and turnover tax.

Let us employ a numerical example to illustrate this, on the assumption that the national income is calculated in the following magnitudes when current prices are used:

	Wage fund (v)	Net income (m)	National income	Ratio of net income to wage fund (in %)
1st group of branches	200	80	280	40
2nd group of branches	400	200	600	50
3rd group of branches	200	400	600	200
	<u>800</u>	<u>680</u>	<u>1480</u>	<u>85</u>

In order to proceed from calculation of the national income in current prices to calculation on the basis of value (i.e., at the site of production), it is necessary to separate out the 1st group of branches, in which the underestimated portion of the surplus product cannot acquire monetary expression in the net income of the other branches. In the two other branches taken together, the value of the surplus product is expressed entirely at the point of sale of the products of these branches, in the form of net income (profits and turnover tax). The actual rate of surplus product in these two groups of branches comes to $\frac{600}{600} \times 100 =$

100%. From this, and on the assumption that the same rate of surplus product holds in the 1st group of branches, we are in a position to approximately determine the entire mass of the value of the surplus product created in the 1st group of branches. It will be equal to 200 units ($\frac{200 \times 100}{100} = 200$), i.e., 120 units more than the 80 units of net income.

If all the value of the surplus product is distributed among the branches in proportion to the wage fund, we obtain the figures shown in the following table.

	Wage fund (v)	Value of surplus product (m)	National income at site of production	National income in current prices	Difference between national income at site of production and in current prices (+)
1st group of branches	200	200	400	280	-120
2nd group of branches	400	400	800	600	-200
3rd group of branches	200	200	400	600	+200
	<u>800</u>	<u>800</u>	<u>1600</u>	<u>1480</u>	<u>-120</u>

Comrade Sorokin holds that, in the formation of accounting prices, or prices approximating value, by distributing the surplus product among the branches of the national economy in proportion to the wage fund, "...there results an estimate in terms of value, not only of the portion of the product created by living labor, but of the entire product, including the transferred value." (2) We cannot agree. The use of this method makes it possible to calculate only net product in terms of value, but not the value of the whole product. Inasmuch as the value transferred from the means of production remains in the estimate at prices below value, the value of the gross product by branches and in the economy as a whole proves to be understated. This was illustrated above in the Reproduction Tables 1, 2 and 3. In order to calculate the total value of output for the branches of the economy, we must recalculate not only the net product but the transferred value also.

If we proceed from the other theoretical point of departure with respect to the relationship between price and value, holding that current prices of the means of production understate values, and that prices of consumer goods overstate them, but that the two balance out in the economy as a whole, we arrive at a significant change in the methods of transition from current prices to value in compiling the balance sheet of the national economy. In this situation, the outlays of social labor (value of the gross social product), national income and the value of the surplus product, are completely accounted for in the sums of current prices. In this situation, one would think that it would suffice to redistribute the value of the surplus product in proportion to the wage fund, and we would emerge with the value of the products in the subdivisions and branches of the national economy, and would identify all deviations of price from value.

Does comrade Sorokin take as his point of departure this theoretical position as to the relationship between the sum of prices and values? His article does not commit itself clearly on this. In the introductory portion of the article (p. 62) he merely contends that: "... prices of a number of products of heavy industry are set below value, and the prices of a number of light industry products are set above, or equal to, value..." The question as to whether the understatement of prices of means of production and the overpricing of consumer goods relative to their values balance out, or what amounts to the same thing, whether the sum of prices equals the sum of values, remains unclarified.

For purposes of examining this theoretical position, let us assume that the total social product in current prices appears like the presentation in the Reproduction Table No. 2 above, and that the conversion from prices to values is performed by the method suggested by Comrade Sorokin, as is reflected in the Reproduction Table No. 3.

Let us turn to a comparative analysis of these reproduction schemes. The entire output of Department II totals as follows, in current prices:

$$420c + 300v + 480m = 1200.$$

When we convert from prices to values we obtain:

$$420c + 300v + 255m = 975.$$

The sum of prices of consumer goods proves to be 225 units higher than the sum of their values. The following question naturally arises: Why has the total level of consumer goods prices been set higher than their value and why do these prices reflect a surplus product 225 units higher than that actually created in Department II?

If the overstatement of prices in Department II is not related to the opposite price situation in Department I, the additional net income realized in Department II should not be redistributed into Department I, inasmuch as it bears no relationship to the creation of this portion of the net income. However, if the overpricing of Department II is due to the underpricing in Department I, then, as soon as we reflect in Department I the entire surplus product created therein, we have to reduce to their value all the material expenditures (c) in Department II. In this situation, the formula $420c + 300v + 255m = 975$ would not at all reflect the full value of production in Department II, inasmuch as the transferred value (c) is not expressed here in terms of value, but in prices which are below value. If current prices in Department II yield a net income of 480 units, whereas only 255 units have actually been created, and if the difference in the mass of realized net income resulting (225 units) comes into being precisely because prices of means of production are set lower than value, the transferred value in Department II has to be increased by this difference. On this basis, the total value of the consumer goods will be:

$$645c + 300v + 255m = 1200,$$

and not

$$420c + 300v + 255m = 975.$$

If the prices of means of production are below value, it is necessary to restate the transferred value in Department I in accordance with the above ratio (645c: 420c), with the result that we will obtain:

$$1075c + 500v + 425m = 2000.$$

On the whole, the reproduction table for both departments will take on the following appearance:

Reproduction Table No. 4

	Values	Prices	Difference between prices and values
I. $1075c + 500v + 425m =$	2000	1400	-600
II. $645c + 300v + 255m =$	1200	1200	—
$1720c + 800v + 680m =$	3200		-600

However, if in converting from current prices to value we confine ourselves only to a redistribution of the value of the surplus product in proportion to the wage fund, leaving the material expenditures in the estimate at prices that are below value, the table of reproduction in accordance with value would take on a different appearance, to wit:

Reproduction Table No. 5

	Values	Prices	Difference between prices and values
I. $700c + 500v + 425m =$	1625	1400	-225
II. $420c + 300v + 255m =$	975	1200	+225
$1120c + 800v + 680m =$	2600	2600	0

The difference between these last two reproduction tables is obvious. It represents a natural consequence of the employment of different methods of converting from current prices to values.

Externally, the No. 5 reproduction table is attractive in that the sum of prices therein and the sum of values are equal and the deviation of prices from values balances out. However, this does not reflect the real economic relationship between the branches and subdivisions of social production. The point is that setting prices of the means of production at less than their value cannot directly influence the level of prices of consumer goods and cause them to deviate in the opposite direction: upward from value. Its only effect is to reduce the costs of capital expenditures in production as a whole, to reduce material expenditures (c) both in Departments I and II, to change the consumer goods price structure in which there is a reduction in c and a consequent rise in m, which we have taken into consideration in proceeding from current prices (Reproduction Table No. 2) to value (Reproduction Table No. 4). Similarly, setting the general level of prices of consumer goods at above value cannot bear directly upon the level of prices of means of production and cause a compensating downward deviation away from their value. In other words, the setting of prices of means of production below their value cannot be a cause for upward deviation of consumer goods prices, or vice versa. The history of price formation does not reveal, nor can it, any such interrelation between the prices of commodities in different areas of circulation in the economy.

Thus, in this situation the theoretical point of departure which holds that there is a mutual compensation between the deviations of prices from value, in our opinion fails to

provide a proper calculation of the value of products in the various departments and branches of the economy. (3)

Finally, let us analyze a case in which the balance sheet for the national economy is plotted from value on the basis of the theoretical position that current prices of consumer goods are higher than their values for reasons not dependent upon the price level of means of production. In these cases, the methods of conversion from calculation on the basis of current prices to calculation in terms of value must also be changed.

As stated above, Comrade Sorokin proceeds from the hypothesis that prices of a number of products in heavy industry have been set below their values, whereas prices of a number of the products of light industry have been set above, or equal to, value.

Theoretically it is entirely permissible to assume that the prices of a considerable number of consumer goods, primarily not the prime necessities, have been set above their values. In this connection, the sum of prices of consumer goods will be above their values, on the whole. This deviation of prices from values can have an independent significance without being directly related to deviations of prices from values of means of production. Day-to-day practice in price formation confirms the lack of a reciprocal influence by the prices in given economic categories of commodities upon the level of prices of other economic groups of commodities. For example, whereas prices of alcoholic liquors were increased in 1958, this did not at all result in the need for a simultaneous reduction in prices either for any other consumer goods or, even more so, for the products of heavy industry or agricultural raw materials.

Thus, if we proceed from the theoretical position that the sum of current prices of consumer goods is generally higher than their total value and that these deviations have independent causes and are not directly connected with the relation between the prices and values of means of production, it will not be necessary, in compiling a balance sheet for the national economy based on value, to redistribute all the net income realized in Department II among all the branches of the national economy. In this situation, the entire excess of net income formed in Department II cannot be regarded as a portion of the value of the surplus product created in other branches of material production (heavy industry, agriculture, etc.). In other words, the excess net income obtained in Department II above the value of the surplus product created in that department (which in our example comes to 180 units of value) is not subject to redistribution among the branches of material production as the balance sheet of the national economy is shifted from current prices to value.

The practical significance of this problem is particularly important for those historical periods in which the general deviation of the sum of prices of consumer goods above values was obvious, and when the price mechanism was actively utilized for redistribution of the national income (excise taxes during the NEP period, and commercial prices in 1929-1934 and 1941-1947).

Comrade Sorokin does not rule out the possibility of employing accounting prices (i.e., values as determined by the method he suggests) for purposes of comparisons over long historic periods. But if, for example, the need arose to prepare a balance sheet for the national economy in current prices and on the basis of value for the period 1941-1947,

it would hardly be economically justifiable to regard the total additional net income obtained from the doubling or trebling of rural retail prices and from the establishment of commercial prices in the cities as constituting the value of a new mass of surplus product created in material production.

In elaborating a methodological approach to conversion from current prices to value in preparing a balance sheet for the national economy, it is also impossible not to take into consideration the degree of deviation of prices from values in the various economic groups of commodities, particularly in the output of heavy industry and of agriculture. For example, we know that until 1953 the procurement prices of agricultural produce were, as a rule, substantially below their values, and one consequence of this was the low payment per labor-day unit. In this connection, a large portion of the income (turnover tax) realized by the procurement organizations and enterprises in the light and foodstuffs industries actually constituted a surplus product created in agriculture. However, if this portion of the surplus product is not "returned" to agriculture in converting from current prices to value, but is left primarily in the form of net income and redistributed among all the branches of the national economy in proportion to the wage fund, the value of heavy industrial output will inevitably be overstated, and the "accounting" price of agricultural produce will not be brought to its real value.

Finally, it is also impossible to leave out of consideration the important fact that prices have been set at different levels in different historical periods for one and the same commodity. This means that the turnover tax on these commodities included various components of varying quantity which, from the viewpoint of society, do not represent the value of the surplus product. (4) In this situation, conversion from current prices to value in preparing the balance sheet of the national economy would require that this portion of the turnover tax be eliminated from the total mass of net income which is to be redistributed among the branches of the national economy, as the total sum of values would otherwise be overstated.

It follows from all the foregoing that the scope of theoretical and practical problems arising in connection with the problem of preparing balance sheets for the national economy in current prices and in value is considerably broader and more complex than the range of questions dealt with by Comrade Sorokin in his article. Discussion of this problem in the pages of *Vestnik Statistiki* will doubtless bring to light a number of other general and special problems, the solution of which will make for a more correct approach to so complex a problem as that of determining the value of output in various branches of the national economy.

Literature Cited

- (1) *Vestnik Statistiki*, 1959, No. 2, p. 65.
- (2) *Vestnik Statistiki*, 1959, No. 2, p. 67.
- (3) See our article on this subject in *Voprosy Ekonomiki*, 1957, No. 6.
- (4) For further detail, see our articles in *Voprosy Ekonomiki*, 1957, No. 6, pp. 103-104, and *Finansy SSSR*, 1959, No. 2, pp. 43-45.

A. Buzan:

Determining Rates of Obsolescence Under Socialism

The problem of determining the scale of obsolescence is not only of theoretical interest, but is of major practical significance as well. Under the conditions of rapid technical progress characteristic of the development of a socialist economy, particularly in its present stage, discovery of the effect of obsolescence upon amortization rates, and consequently upon calculation of costs of production is of extraordinary importance.

Obsolescence is a process of depreciation of fixed capital and reduction in its value due to the rise in the productivity of the labor of society. Value is, as we know, governed by the expenditure of socially necessary labor. From this it follows that the reasons for the depreciation of fixed capital must be sought in the sphere of production, and that the problem of determining the scale of obsolescence is, by its economic nature, essentially a problem of determining changes in the level of expenditures of socially necessary labor.

The depreciation of machines, as a special case of depreciation of fixed capital, may occur in the first place as the result of reduction in the cost of production of the same model of machine, and secondly as a result of the appearance of new machines providing a higher productivity of labor. These two factors may also be at work simultaneously. The delimitation of these two forms of obsolescence, as defined by Karl Marx, is the point of departure for our analysis. However, the manifestation of the law of value and the mechanism of its operation differ completely as between these two forms. Therefore, analysis of the operation of the law of value as it is manifested in the category of obsolescence has to proceed separately for the first and second forms of obsolescence.

Value is determined by the socially necessary expenditures of both living and materialized labor. Therefore, it is entirely inadequate, for solution of the problem of obsolescence, merely to state the fact that the total value of a unit of product diminishes as the result of the employment of more productive machines. The problem lies in determining the special features of changes in the magnitude of socially necessary expenditures of labor separately for living and materialized labor.

Only such a posing of the problem can create the prerequisites for its solution.

Finally there is the matter of terminology. Despite the obvious shortcomings of the term *moralnyy iznos*, (1), we believe it desirable to continue its use, because it has become firmly rooted. At the same time, as analysis shows, the employment of more highly productive machinery exercises a wholly different influence upon variations in the quantity of socially necessary expenditures of materialized and living labor, and induces, in consequence, results that are completely different in terms of economic content and consequences. These differences are of substantial significance both for theory and practice. It therefore becomes necessary, along with the concepts of the first and second forms of obsolescence, embracing the laws of change in the socially necessary expenditures of materialized labor, to employ a concept embracing the laws of change in the

socially necessary expenditures of living labor. The latter concept, in our opinion, may be expressed by the term "labor-saving."

The first form of obsolescence (we shall, to simplify the analysis, talk only of machines) is induced by a reduction in the value of the same model of machine as the result of reduction in the expenditures of labor socially necessary to produce it. This may be a consequence of a rise in labor productivity either in the branches of industry producing these machines or in the branches producing the materials out of which these machines are manufactured. In practice, not only is the value of new machines of a given model lower, but their productivity is higher. However, in order to simplify our analysis let us assume that the productivity of the machines does not change.

The fact that replacement of the value of fixed capital occurs over a more or less lengthy period in which it functions as a use value is the source of its depreciation. The appearance of machines of the same model which are cheaper, even when they are not more productive, has as its result that the outdated machines depreciate and become obsolete before they have become physically worn out. If we denote the new and lower level of a machine's value (relative to the original value) as K_1 , and the initial value of the old machines as W , the absolute depreciation of the latter, M_1 , will be

$$M_1 = W - WK_1 = W(1 - K_1) \quad (1)$$

where the difference $(1 - K_1)$ will represent the degree of obsolescence of machines of the first type. And as the productivity of the machines is presumed not to vary, the share of the value of the machines which is transferred to each unit of finished product has to diminish in accord with the level of obsolescence. There must also be a corresponding reduction in the absolute amount of the depreciation charges per unit of product and consequently in the value of the latter.

Thus, the reason for the appearance of the first type of obsolescence of machinery is a reduction in the level of socially necessary labor time required to manufacture it. The operation of the law of value in this situation is manifested in the same manner as in the reduction of the value of any other commodity, inasmuch as the magnitude of value is determined not by the conditions of production but by those of reproduction, not by the individual but by the socially necessary expenditures of living and materialized labor.

In its second form, obsolescence is induced by the appearance of machines of new design making for a higher productivity of labor. To simplify analysis of the problem let us assume that the new and more productive machines do not differ in value from the old. Introduction of these machines on a significant scale causes a reduction in the expenditures of labor-time socially necessary for the manufacture of the commodities produced by means of these machines, i.e., a reduction in the value of commodities.

However, this reduction is a considerably more complex and profound process than that resulting from a mere reduction in the cost of the machinery (type I obsolescence). Here the reduction in value is caused not only by a reduction in the expenditures of the labor materialized in the machines and transferred to a unit of product, but by a reduction in the expenditures of living labor due to the rise in its productivity (the scale of expenditures for materials is assumed not to change, under the given conditions). The total reduction in the cost of a unit of product represents, in the given instance, the result of the total change in the magnitude of expenditures both of materialized and of living labor. The former determines the reduction in the transferrable portion of the value previously created, and consequently the change in the scale of obsolescence in its second form, while the latter determines the change in the magnitude of the newly created value, and therefore does not influence obsolescence.

The following question arises in this connection: Why, given an equal value of the old and the new and more productive machines, do the former suffer a partial loss in value? Let us assume the initial value of the old machines to have been W , and their total productive capacity (for the entire expected service life) to be N units. The socially necessary magnitude of the value transferrable per unit of output will then have to be $\frac{W}{N}$. The appearance of new and more highly productive machines (equal in value to the old) makes for an increase in the productivity of social labor. Let us denote the coefficient of rise in the productivity of social labor as K_2 . It will be more than unity, and the new total productive capacity of the machines will obviously be $N \times K_2$. There must also be a corresponding change in the value transferred by the machines to a unit of product. This will now be $\frac{W}{N \times K_2}$ and will be lower than the original. In this situation the value of the old and less productive machines will be returned to the value of a unit of product only in the new, socially necessary, and not in its initial magnitude.

The difference between them provides the scale of reduction in the value of the machines reimbursed per unit of product, and the ratio of this difference to the initial reimbursable value thereof expresses the degree of depreciation of the old and less productive machines, which will be

$$\left(\frac{W}{N} - \frac{W}{N \times K_2} \right) : \frac{W}{N} = 1 - \frac{1}{K_2}.$$

If we multiply the initial value of the old machines by the magnitude expressing the degree of their depreciation, we derive the absolute depreciation due to type II obsolescence.

Denoting the latter by M_2 , we get $M_2 = W \left(1 - \frac{1}{K_2} \right)$. (2)

Thus, the appearance of new machines making for a higher labor productivity diminishes the socially necessary magnitude of past labor transferrable to a unit of product manufactured with these machines.

The operation of the law of value in the first and second types of obsolescence is manifested differently.

Whereas the former type of obsolescence means that the partial loss of the value of the old machines is a direct consequence of a reduction in the value of these machines themselves, whose manufacture requires, under the new conditions, a smaller amount of socially necessary labor, the second form involves a reduction in the value of the products made with the aid of these machines, as a result of a reduction in the magnitude of the socially necessary expenditures of materialized labor transferred to a unit of product.

Whereas in the first form of obsolescence the reduction in the socially necessary expenditures of labor per unit of product is a consequence of partial loss in their value, under the second type this reduction is a cause of the depreciation of technologically obsolete machines. In the first type of obsolescence, the operation of the law of value applies directly to the old machines, as commodities having individual values higher than their social value, whereas in the second type it applies to the products manufactured by the outdated machines. The reduction in the value of the machines marks only the onset of the process of obsolescence in the former case, whereas in the latter it denotes its completion.

Whereas, under the first type of obsolescence, the use-value of the machines undergoes no change, under the second type it does change.

Whereas the partial loss of the initial value of the fixed capital under the first type of obsolescence induces a reduction in the socially necessary level of depreciation charge per unit of output, the second type, on the contrary, is one in which the reduction of this magnitude induces a partial loss of value of the fixed capital.

Finally, whereas under the first type of obsolescence, the total reduction in the socially necessary depreciation charge is, all other conditions being equal, equivalent to the absolute magnitude of the loss in the initial value of the fixed capital, under the second type of obsolescence, contrariwise, the absolute magnitude of the loss of the initial value of the fixed capital is equivalent to the total reduction in the socially necessary depreciation charges.

As noted above, the two forms of obsolescence operate simultaneously in the majority of cases.

The absolute level of obsolescence in these cases (M_3) will obviously be $M_3 = M_1 + M_2 = W (1 - K_1) + WK_1 \left(1 - \frac{1}{K_2} \right)$
 $= W \left(1 - \frac{1}{K_2} \right)$, (3)

where the factor $1 - \frac{K_1}{K_2}$ expresses the degree of fixed capital depreciation.

The formula adduced (3) makes it possible to determine the magnitude of obsolescence for cases in which the two forms operate jointly and when they operate separately, in other words, it is a formula general in type. When the types of obsolescence function separately, one of the coefficients (K_1 or K_2) is equal to unity, in which case the equation transforms either to formula (1) or formula (2) given above.

The content of the problem of obsolescence includes questions as to the causes, mechanism and scale of depreciation of fixed capital due to increases in the productivity of social labor, i.e., problems related to variations in the magnitude of the socially necessary outlays of past labor per unit of output. But as more productive machines come into use, a reduction occurs not only in the expenditures of past labor (per unit of product) but in those of living labor. Therefore the economic consequences of the utilization of more productive machines are not limited solely to the partial loss of the initial value of obsolete machines. The introduction of more highly productive machines reduces the magnitude of the socially necessary expenditures of living labor per unit of output. As a result, the individual expenditures of living labor at enterprises utilizing technologically outdated machines prove to be larger than is socially necessary, and labor of equal duration, intensity and skill creates less value at these enterprises than was previously the case, prior to the appearance of the more modern machines.

Let us determine the magnitude of the loss of value due

to the utilization of outdated equipment. Let us assume that the socially necessary expenditures of living labor per unit of product prior to the appearance of the new machines were

$$\frac{v+m}{N},$$

where $v+m$ are the symbols for living labor or newly created value, and N is the productivity of the old machine.

The introduction of new machines leads to a reduction in expenditures of living labor per unit of product in a ratio inversely proportional to the rise in labor productivity (K_2). The new socially necessary expenditures of living labor per unit of output will obviously be $\frac{v+m}{N \times K_2}$. The difference between the former and the new magnitude of socially necessary expenditures of living labor comes to

$$\frac{v+m}{N} - \frac{v+m}{N \times K_2} = \frac{v+m}{N} \left(1 - \frac{1}{K_2}\right). \quad (4)$$

This formula defines the magnitude of loss of value created by living labor as a consequence of the use of obsolete machines per unit of product, and the total loss of value

$$\text{will obviously constitute } \frac{v+m}{N} \left(1 - \frac{1}{K_2}\right) N = v+m \left(1 - \frac{1}{K_2}\right). \quad (5)$$

The process of loss of a portion of the newly created value as the result of utilization of outdated machines — the process which we term obsolescence stemming from the use of labor-saving machines (2) — must be differentiated from type II obsolescence. (3) Although these processes are called to life by the same common cause — the introduction of more productive machines and a rise in the productivity of social labor — their content and economic consequences differ. Ordinary obsolescence represents a partial loss of the initial value of the means of labor, whereas labor-saving obsolescence represents a partial loss of the newly-created value. The economic limit of ordinary obsolescence is the initial value of the means of labor, whereas the economic limit of labor-saving obsolescence is the magnitude of the surplus product. Finally, ordinary obsolescence leads, all other conditions being equal, to a loss of a portion of the value of the fixed capital, whereas labor-saving obsolescence leads, under the same conditions, to a loss of part of the net income of society.

In the light of the foregoing it appears desirable to give detailed consideration to certain questions that have emerged from the practice of socialist production in connection with the processes of ordinary obsolescence and labor-saving obsolescence.

To begin with, there is the question of reimbursement for, and the sources of reimbursement for the losses in value induced by these processes. It appears to us that the very posing of this question is mistaken. What, after all, has to be made good? The difference between the initial and the replacement value of the fixed capital? But this difference expresses different levels of expenditures of socially necessary labor for the production of machines in connection with the rise in labor productivity. Essentially, it merely testifies to the degree of labor that could be saved if either cheaper or more productive machines were employed. Therefore it is impossible to go hunting for such "sources" of reimbursement in the creation of various special modernization funds or increase in the rates of depreciation charges for obsolescence.

It would appear to us that the general conclusions on this matter boil down to the following.

First. The partial loss of the initial value of fixed capital

due to types I and II obsolescence, being related to the growth in the productivity of social labor, is an objective and progressive economic phenomenon and requires revaluation of this capital. This loss should be reflected in the capitalization of the enterprise, without touching upon the results of its economic activity. Depreciation charges should be included in the costs of production on the socially necessary scale, i.e., on a scale reflecting the real loss of value of fixed capital and one that corresponds to the new and lower level of the social value of the latter. Thus, ordinary obsolescence as an expression of the growth in the productivity of social labor is a factor in the reduction and not the increase of production costs.

Second. Losses in value as the result of labor-saving aspects of new machines should be fully reflected in the results of the economic operation of an enterprise, without in any way affecting the value of its fixed capital, as the utilization of outdated machines results in loss of part of the net income of society, and only as a consequence of the latter and within the limits thereof is more or less lengthy employment of such machines possible, all other things being equal.

Third. In reality only the two sources of funds exist, from which it is possible to achieve an increase in fixed capital, modernization of equipment in operation, and complete replacement of obsolete equipment by new equipment. This is newly created value in the form of a portion of the net income of society, and a transferred portion of the value of the means of labor in the form of depreciation charges.

Another question requiring solution is the following. It is the practice, in socialist management, to value fixed capital on the basis of its initial value. There can be no doubt that this method of estimation is the simplest possible one and the most convenient from the practical viewpoint. But in our opinion there is no question that this method is the least valid, in terms of theory.

The method of valuing fixed capital in terms of initial value fails completely to reflect the changes that occur in the process of production, changes induced by the process of technology and the rise in the productivity of the labor of society. Moreover, this method, by assuming constant depreciation charges, does not permit a correct determination of the cost of production. The magnitude of depreciation charges, as an element of production costs determined in accordance with the initial value of the fixed capital, remains at the same level during the entire service life of the latter under the present standards of charges. This method of valuation does not stimulate technological re-equipment of enterprises, improvement in the utilization of fixed capital, or reduction of costs of production on this basis.

The only scientifically valid method of valuing fixed capital under socialism is to do so not on the basis of its initial cost but on the basis of its replacement cost, which accurately reflects the operation of the law of value in socialist economics.

References to the difficulty and complexity of estimating fixed capital in terms of replacement cost cannot be deemed a serious foundation for rejecting this method of valuation, the more so as a considerable portion of these purely technical difficulties can be eliminated even today, thanks to the development of accounting and computer equipment. A systematic revaluation of fixed capital will naturally require additional resources and effort. But these additional outlays will be covered, and with plenty to spare by the economic gains that will be obtained by socialist society as the result of estimating fixed capital in accordance with the requirements of the law of value.

Without prejudging the frequency with which fixed capital should be revalued, it should be noted that it would hardly appear necessary to do this annually. Revaluation every five years would be entirely possible and adequate. A combination of periodic and current reappraisals would also be possible. The reappraisal of fixed capital as of January 1, 1960, might constitute the necessary point of departure for such systematic revaluations in the future.

Finally, our press is conducting a broad discussion of the question of the influence of obsolescence on the magnitude of depreciation charges. Should these charges provide for obsolescence?

The very posing of this question is incorrect, as it contradicts Marx's theory of value. The matter is not merely — as A. Pervukhin states (4) — that "incorporating losses in value due to obsolescence into depreciation charges is to admit of the existence of exchange value without use value." What is fundamental is the fact that the scale of depreciation is determined, as an element in value, by the level of the socially necessary expenditures of labor materialized in fixed capital, and is, at each given moment, a wholly determinate value, existing objectively and not dependent upon any subjective concepts, desires or interests whatever. To anticipate, in depreciation charges, the possible loss of value of fixed capital due to expected obsolescence is to base the determination of costs of production not upon the real magnitudes of the socially necessary expenditures of labor, but upon false and subjective factors. This free attitude toward the law of value would, in practice,

inevitably lead only to a redistribution of the national income in one form or another. In other words, sooner or later, the law of value would again manifest itself as an objective law.

The partisans of providing for obsolescence in depreciation charges are clearly confusing the matter of obsolescence proper with questions of the methods and means making for the most rapid amortization of fixed capital due to the threat of depreciation, which is the more real, the more rapid the rates of technological reconstruction of the national economy.

It is possible and necessary to develop a scientifically based criterion for determining the service life of fixed capital. The best possible utilization of the latter is a pressing necessity. About this there can be no argument. But one cannot seek methods for complete amortization of the initial value of fixed capital in the methods of "preventive amortization." These methods are in no way compatible with Marx's labor theory of value.

Footnotes

- (1) "Moral wearing out," rendered throughout as "obsolescence" (Editor).
- (2) *Moralnym ustareniem mashin* (Editor).
- (3) *Moralnogo iznosa* (Editor).
- (4) See *Voprosy Ekonomiki*, 1957, No. 1, p. 118.

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supply. But the conformity of demand and supply is taken into account in setting prices of individual goods. In a number of cases, to avoid profiteering and the disorganization of trade in goods the supply of which is short, higher prices are set for them. Thus, in January 1958, prices were raised for goods the output of which is still limited (motorcars, motorcycles, factory-made carpets). The establishment of proper relationships between prices of goods which meet approximately the same requirements is of great importance. A few years ago the price of vegetable oil was only 5-10% lower than the price of butter. This restricted the sale of vegetable oil. Lard was considerably more expensive than butter, which also disturbed the necessary proportion

between the demand for, and supply of, these goods. A reduction of prices of vegetable oil and lard helped establish the proper relationship between demand and supply of these products. Adjustment and removal of discrepancies in prices of some goods, through a reduction of prices, is to be effected in the current seven-year period.

The present stage in communist construction is characterized by a great expansion in the output of consumer goods and a rise in the incomes of the population. In these conditions the task of establishing the necessary relationships between demand and supply becomes particularly urgent. Observance of the proper proportions in this sphere is an important factor in the growth of the people's living standards.

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Ekonomicheskoi Informatsii, Kaliningrad, 1959, No. 1 (6)

(2) See, for example, the interesting models presented by Academician S. Strumilin in his article "The National-Economic Balance Sheet as an Instrument of Socialist Planning" (*Voprosy Ekonomiki*, 1954, No. 11).

(3) A substantiation of the importance of the relative form

of growth (relative rate) has been given in our articles "Die Bedeutung logarithmischer Masstabe bei der Planung und Analyse ökonomischer Prozesse" (*Statistische Praxis*, Berlin, 1955, No. 11) and "The Importance of Semi-logarithmic Grids in Statistics" (*Vestnik Statistiki*, 1957, No. 1).

V. Belkin:

Economic Calculations With the Aid of Electronic Computers

Among other things, the research program of the Electronically-Controlled Machines Institute of the USSR Academy of Sciences covers planning and statistical applications of high-speed electronic computers. Preliminary results of these researches have been very promising. Electronic computers are assuming crucial importance in economic calculations as the socialist economy expands, as relations between individual areas and industries develop and become more complex, and as greater emphasis is placed on specialization and cooperation among enterprises under the current seven-year plan.

There are specialists who believe that the principal purpose of electronic computers is to mechanize the labor of economists, statisticians and planners, to relieve them of computing work while leaving unchanged the approach to planning methods. The main objective, they maintain, is to equip the state and economic machinery with electronic computers at different levels. This viewpoint cannot be considered correct. True, the use of computers makes it possible to reduce the size of the state administrative apparatus. However, the main and immeasurably greater effect of electronic computers is the possibility of employing more advanced methods of economic planning commensurate with the vast potentialities of such machines. Some of these methods are not novel, but their application to specific economic problems in the past required an amount of numerical calculations far beyond the power of previously existing computing facilities.

Before the advent of electronic computers, exact methods were only applied to abstract mathematical models in economics, where algebraic symbols and a limited amount of arbitrary data taken for illustrative purposes were handled. Electronic computers have opened up a wide scope for the rapid development of applied mathematics to a point where it is finding its way into all branches of scientific and economic activity, including economic planning.

In the process of conducting research on planning and statistical applications of electronic computers for the national economy, the Institute's staff has revealed a wide range of problems in which electronic computers are the most efficient, or even the only, means of solution. The sequence of operations has also been worked out for such problems. The general objective here is the development and practical mastery of a technique for economic computations which would allow the optimum plan to be computed within the shortest possible time and the necessary changes to be made in it as the plan is being realized. Such a plan may be visualized as a detailed dynamic model of the entire national economy, which would take into account all essential peculiarities of its development over the planned period.

In a dynamic model the reproduction process is described by a system of differential equations, with a lagging factor expressing capital investments in the national economy. The dynamic model should represent the national economy changing over time. Quite a number of important difficulties

are involved in solving this crucial problem. They will hardly be eliminated completely in the near future. To achieve the stated objective, a series of subsidiary problems will have to be solved first. However, it would be ill-advised to look upon these subsidiary problems from the standpoint of the principal objective alone. In fact, they are of independent importance in planning. Economists and mathematicians at the Institute are now working on the solution of these problems.

One such problem is to calculate total labor and material cost coefficients in the production of a variety of products in the national economy. In effect, these coefficients establish relationships between the aggregate social labor as a whole and those portions of it which are used for consumption and accumulation (the national income). It follows that a table of total cost factors will permit a balanced national economic plan to be drawn up, providing for the projected volume of material goods earmarked for consumption and accumulation. Total cost coefficients may be computed both for individual industries and areas. In this case, they will help to improve the analysis and planning of economic relations between economic councils, and between the Union republics.

The techniques of calculating total cost coefficients on electronic computers were developed at the Institute in 1957. A little later, the M-2 computer calculated these coefficients in physical quantities on the basis of the data supplied by the Economic Research Institute of the USSR State Planning Committee. In 1959, similar coefficients, though in value terms, were computed for the State Planning Commission of the Polish People's Republic. Various forms of total cost coefficients have been calculated on the basis of the national economic balance sheet pre-processed by the Laboratory of Mathematical and Statistical Methods in Economics (the Siberian branch of the USSR Academy of Sciences).

Another problem which has of late been attracting the attention of Soviet economists is the calculation of social costs of production for the purpose of working out an economically sound price system. The Institute has developed a calculating technique for each of the three principles of price formation that are now under discussion. It has also worked out logarithms and carried out tentative computations on the basis of arbitrary data. Prices have been computed which include the surplus product in proportion to wages, production costs, and fixed and working capital.

The use of electronic computers for such purposes is necessary because some products constitute the material inputs in the manufacture of other products. Thus, a change in the price of some product entails changes in the prices of many other products which are, directly or indirectly, related to it in production. On top of this, the calculation of prices incorporating the surplus product in proportion to capital used in production calls for a revaluation of fixed capital. On electronic computers, the revaluation is accomplished over and over again until a correlation is obtained

between prices, the rate of profit, and the value of capital in production. Millions upon millions of mutually related calculations have to be performed before economically sound prices are computed.

The Presidium of the USSR Academy of Sciences has set up a commission to deal with the calculation of costs. The commission is to work out the methodological problems of price formation, to collect and process the requisite numerical data which will make it possible to begin practical price calculations.

Improved planning of material-technical supply is one of the urgent problems of national economic planning. Among other things, this problem involves calculating an optimum assignment of consumers to suppliers and a conformity between prices at the point of production and at the point of consumption. These prices should stimulate operations in accord with the optimum consumer-supplier assignment scheme, accelerate the filling of consumers' orders and provide a more rapid check on the progress of the material-technical supply plan so that timely changes may be introduced into it for the remaining period.

Working in collaboration with the Council for the Study of Productive Forces (under the USSR Academy of Sciences) and the Economic Research Institute (under the USSR State Planning Committee), the Institute has been conducting studies on the application of electronic computers in the planning of material-technical supply. The primary objective is to work out plans of material-technical supply for such economically important and bulky commodities as coal and cement. A comprehensive program has been prepared for calculating an optimum system of supplies and prices on electronic computers by the use of linear programming methods. Under this program, experimental calculations have been performed involving a system of efficient coal shipments for Eastern Siberia and the Soviet Far East.

At first sight, the problems presented to the Institute may seem irrelevant. However, their solution is an indispensable stage in the elaboration of a method of calculating an optimum plan in the form of a dynamic model of the economy on electronic computers.

In drawing up a balanced plan based on coefficients of total costs, it is assumed that the effects of capital investments and technical progress will be taken into account by planning authorities according to existing methods and will be expressed in changes in technological coefficients and amounts of finished products. After these indices have been established, a draft plan may be drawn up through the use of electronic computers. In fact, a series of drafts may be obtained. Their number depends on the number of production-flow charts possible in the manufacture of the various products. A universal yardstick in selecting the optimum draft is that of minimum inputs of social labor. Under the law of value, to obtain the numerical value of this yardstick it is necessary to compute economically sound prices.

Apart from the preparation of the optimum economic plan, there are a number of partial problems and partial criteria

for the selection of optimum drafts of different planning schemes. An optimum scheme for the assignment of consumers to suppliers is one such problem. The criteria here may be, for example, the minimum costs of shipments or the least ton-kilometers. While an optimum version of the economic plan as a whole is much more difficult to compute on electronic computers than an optimum supply scheme is, they have much in common and to a certain degree they may both be solved by linear programming methods.

For all their potentialities, linear programming methods cannot be considered as all-embracing. They are applicable to problems in which relations between functions and factors are linear. For example, in the above problem, shipping costs vary directly with tonnage over a given distance. In reality, however, the relation is much more complex. Thus, an increase in the volume of shipments may change the cost of one ton-kilometer. However, as far as linear relationships are concerned, linear programming methods are very efficient. The expression of national economic relationships through systems of algebraic equations and the solution of extreme problems by linear programming methods is a sort of abstraction. But this is a very fruitful abstraction describing economic reality at any given moment.

The objective of further research on the application of electronic computers to economic planning should be to improve balanced planning, notably by areas, and the calculation of social costs of production. Another promising approach is the extrapolation of optimum solutions for one industry to a complex of industries. In this connection, we should mention a research program initiated by the Institute in collaboration with the Council for the Study of Productive Forces (the USSR Academy of Sciences) and the Laboratory for the Application of Mathematical and Statistical Methods in Economics (the Siberian branch of the USSR Academy of Sciences). The objective of the program is to draw up a rational fuel balance for the country as a whole. A prerequisite for a reliable calculation of the fuel balance on electronic computers is an investigation into the interchangeability of various fuels — coal, oil, and gas — and the determination of actual social labor costs involved in their production. As soon as this prerequisite is fulfilled, electronic computers using linear programming methods will be able to calculate an optimum plan for the production and consumption of fuels, both by industries and by areas. The best possible solution of the fuel balance problem can be obtained if it is approached as part of the over-all power supply balance of the country. This will call for further refinements in calculating techniques on electronic computers.

It is necessary to introduce electronic computers and tried and tested methods of economic calculations into planning practice as soon as possible. It is only on this basis that a change-over can be effected from static to dynamic models by means of electronic computers, and from linear to dynamic programming.

L. Meshchaninov:

The Relation Between the Rates of Increase of Labor Productivity and Wages*

It is logical that the rates of increase of labor productivity should exceed the rates of growth in wages. Therefore, practical calculation and planning of the relationship between their rates of growth is of great significance.

The requirement that labor productivity rise more rapidly than wages derives from Marx's law of the rising productivity of social labor. This law means that the share of outlays of living labor diminishes in the course of a simultaneous reduction in total labor expended upon the production of a unit of product. Consequently, an increase in labor productivity requires an increase in the share of congealed labor in the total outlays per unit of product, i.e., a rise in the share of the means of production in total outlays on production, while total expenditures drop. However, this is achievable only on the condition that the rate of increase in the production of means of production exceeds the increase in the production of consumer goods.

The following are the conditions under which the more rapid increase in the production of means of production can take place:

- (1) when labor productivity in Department I increases more rapidly than in Department II, and the ratio between the number of workers in the two departments remains static;
 - (2) when both the productivity of labor and the number of workers in Department I grow more rapidly than in Department II;
 - (3) when labor productivity in Department II rises faster than in Department I, but the number of workers in Department I rises more rapidly than in the other department.
- Under these conditions, the increase in the number of workers in Department I must be sufficient to assure a more rapid rise in production in that department.

In all three of the cases cited, production will rise more rapidly in Department I than in Department II, which is the material foundation for a rise in real wages. If, this being the situation, the number of workers remains static, the productivity of the labor of society will rise more rapidly than the total output of Department II. If the number of workers grows, the entire output of Department II may rise more rapidly than does labor productivity, but the quantity of consumer goods per worker (the material foundation for average real wages) will grow less rapidly than labor productivity.

* The writer is working on a dissertation on the ratio between the growth rates and mutual effects of labor productivity and wages. The dissertation uses the coal industry as a model for examination of a number of problems involved in a more rapid growth of labor productivity than of wages, methods of determining the gap between these rates in the plan, and trends in the rates of growth of labor productivity and wages. The present article states some of the theoretical problems presented in the dissertation (Editor of *Scientific Reports*).

Consequently, normal realization of expanded socialist reproduction requires that labor productivity always rise more rapidly than the volume of consumer goods per worker in production.

However, production in Department II depends not only upon workers in the sphere of material production, but workers in the non-productive sphere. This means that, all other conditions being equal, the rates of increase in the volume of consumer goods per working person will depend upon the ratio between the number of workers in production and those in the non-productive sphere.

In socialist society, thanks to the all-round mechanization and automation of production and the rapid development of the system of public health, education, and cultural services for the population, the share of workers in the non-productive sphere tends to rise. This means that the volume of consumer goods per working person rises less rapidly than the volume of consumer goods per worker in the sphere of material production.

However, the volume of products in Department II per working person is not equivalent to real wages.

The point is that all the output of Department II does not go into the consumption fund of the national income. A portion of it goes for accumulation, i.e., for involving additional workers in production. A change in the share of the output of Department II employed for accumulation will influence the increase in the volume of consumer goods per working person.

Moreover, the entire consumption fund in the national income is not realized in the form of real wages. Today the Central Statistical Administration of the USSR calculates the rise in the real wages of the working people in two indices: first, by the increase in the money wage with due consideration for changes in the retail price level and the rates charged for services, and secondly, by the rise in the money wage with allowance not only for changes in prices and rates, but also for increases in the free benefits and services to the working people. The second index is used chiefly to compare the growth of real wages of the working people in the USSR and in the capitalist countries. This is fully justified, because under socialism the state provides people with much more in the way of free and partially free goods and services than in any capitalist country. However, the economic content of real wages includes only the quantity of material goods and services which people may acquire in exchange for their money wages. In other words the real wage is the money wage after account is taken of the consumer goods price level and charges for services.

This concept of the real wage is determined by the essence of the category, wages, under socialism. Under socialism, wages are employed to distribute the consumed portion of the national income in accordance with the quantity and quality of work performed. All other payments and benefits granted by the government to the population are

based on different principles. Thus, public health and educational services are based on distribution in accordance with need. The payment of stipends and various benefits, although based on a consideration of the degree of participation in labor, is nevertheless founded essentially on the "equality principle," etc. Therefore, these payments and benefits, not embraced by the concept of real wages, do enter into the category of the real income of the population and comprise a fund of social consumption, or as Marx termed it, a fund earmarked for joint consumption.

In his profound remarks on the Program of the German Workers' Party, Marx noted that, in a socialist society, before the portion of the social product earmarked for consumption could be distributed in accordance with work performed, it is necessary to deduct therefrom, not only the costs of administration, but "... that which is designated for the joint satisfaction of needs, such as schools, public health institutions, and the like. This share immediately shows a substantial rise in comparison with its share in contemporary society, and will continue to rise as the new society develops." (1) Inasmuch as the distribution of the social consumption fund is primarily in accordance with need, its share will constantly rise as our country moves toward the higher phase of communism. This tendency is clearly marked in the Target Figures for the Development of the USSR Economy in 1959-1965. Whereas money wages are to rise by 26%, the real income of the wage and salary earners is to increase by 40% in the course of the Seven-Year Plan.

Under these conditions real wages will increase more slowly than the volume of goods and services actually consumed by each working person.

All the foregoing requires not only a more rapid rate of increase in labor productivity than in real wages, but the possibility of determining the actual magnitude of this difference. In order to determine the maximum possible rise in the real wages of the working people for a given period, the rise in labor productivity has to be corrected by the following indices:

- (1) the share of output in Department I in the entire output of the national economy,
- (2) the share of the number of workers in the non-productive sphere,
- (3) the proportion of the output of Department II going to accumulation, in the total output of this department, and
- (4) the share of the social consumption fund in the total consumption fund of the national income.

Let us present a hypothetical example. Let us suppose that it is proposed to increase labor productivity during the plan period by 50%. Further, the share of production in Department II, as the result of a more rapid rise of Department I in the entire national economy, diminishes by 2%; the number of workers in the sphere of material production drops by 1% relative to the total number of wage and salary earners; the share of the portion of the consumption fund realized in the form of real wages shows a relative decline of 3% as the result of the more rapid increase in the social consumption fund, and the share of the output of Department II going to accumulation remains unchanged relative to the total volume of output in that department. Under these conditions, the index of growth in real wages will come to:

$$1.5 \times 0.98 \times 0.99 \times 0.97 = 1.41$$

Consequently, under these conditions, real wages cannot rise by more than 41% during the period covered by the given plan.

Thus, in the national economy as a whole, the relationship

between the rate of growth in labor productivity and real wages has a completely determinate quantitative expression.

With respect to money wages and salaries, they will rise at the same rate as real wages if there is no change in price and rate levels. However, if the money wage rises more rapidly than labor productivity, this will have the result that the quantity of consumer goods will not correspond to the effective demand of the population. In this situation it would be necessary to increase the share of accumulation employed to develop the production of consumer goods, and that would signify a slowing down of the rates of increase in the production of means of production, or a reduction in expenditures on public health, education, stipends and the like, i.e., a reduction in the share of the social consumption fund. However, reduction in the share of the accumulation fund or the public consumption fund would represent a violation of the laws of development of socialist society.

If money wages and salaries grow more rapidly than labor productivity, an increase in the prices of consumer goods and the charges for services can bring about a correspondence between the growth in real wages and that of labor productivity. Consequently, if the money wage of the working people rises more rapidly than the increase in labor productivity, there would be an inevitable increase in retail prices. This conclusion is supported by the experience accumulated in the building of socialism. Thus, from 1940 to 1955 money wages rose more rapidly than labor productivity. During that period, labor productivity in industry rose by 98%, while money wages and salaries increased by more than 130%. The result was that in 1955 retail prices were 38% higher than in 1940, and it was this that made possible a proper relation between the rates of increase in labor productivity and real wages. From 1940 to 1955, the real wages of workers in USSR industry rose by 90%, and the productivity of labor in industry increased by 98%. (2)

It is not desirable that monetary wages rise more rapidly than labor productivity, as this reduces the buying power of the ruble.

During four years of the Fifth Five-Year Plan, underfulfillment of the plan for the increase in labor productivity in industry and repeated reductions in retail prices caused real wages and salaries to rise by 37% during that period, while the productivity of labor in industry rose 33%.

The Party then took measures to bring the rise in wages and in labor productivity into a proper relationship. For the 5th Five-Year Plan as a whole, labor productivity rose by 44%, and real wages and salaries rose by 39%. However, these data are not wholly comparable, as the increase in labor productivity is for industry alone, and that of real wages and salaries is for the national economy as a whole.

The relationship between the rates of growth of labor productivity and money wages is of considerable importance. Wages represent a substantial proportion of the costs of industrial production, and therefore a more rapid rise in labor productivity than in wages is one of the most important factors in cost reduction. In the given case, it is necessary to compare the increase in labor productivity and the workers' wages. The wages of other categories of industrial personnel fall under the heading of so-called fixed conditional expenditures, reduction of which, per unit of output, is directly dependent not upon a rise in labor productivity but upon the growth in volume of production.

A more rapid growth in labor productivity than in wages is particularly important in order to bring about a reduction in production costs in those branches of industry where the share of wages in production expenditures is high.

However, in branches where the wages of the workers represent, say, 6%, 8%, or 10% of production costs, the increase in labor productivity, although it constitutes an important factor in cost reduction, will have a less pronounced influence. A 1% rise in wages in various branches of industry will have different effects upon costs of production. This effect depends upon the share of wages in total expenditures on production. If, in a certain branch of industry, wages represent 640 rubles per 1000 rubles of expenditure, and in another they represent 110 rubles, an increase of, say, 10% in wage payments will yield different results in the two branches, all other things being equal. In the first branch, costs will rise by 6.4%, and in the second only by 1.1%.

Consequently, the smaller the share of wages in costs of production, the smaller the effect upon costs of the relationship between rates of increase in labor productivity and average wages.

In industry as a whole, wages constitute about 20% of production costs. Therefore the saving in wages per unit of production is an important, but not the sole factor in reducing the cost of industrial production. The following data will offer some idea of the role of other factors:

Reduction in Cost of Comparable Commodity Production During the Years of the Fifth Five-Year Plan (In the Prices of the Respective Years)*

	1951	1952	1953	1954	1955
Reduction in total production costs as % of average annual production costs in preceding year	7.0	8.1	5.1	3.9	2.1
% of above due to reduction in share of wages per unit of product	0.8	0.8	0.6	0.5	0.9

* Promyshlennost SSSR, Gosstatizdat, 1957, p. 30.

Thus, during the 5th Five-Year Plan, reduction in production costs occurred chiefly not as the result of reduction in workers' wages per unit of output, but as the result of other factors.

However, maintenance of a proper relationship in rates of increase in labor productivity and wages is necessary not only for purposes of reducing cost of production. A more rapid increase in wages than in output per worker leads to an increase in the share of wages in costs of production. The coal industry may serve as an example of this. In 1945, the average monthly output of coal per worker in that industry was 80% of the 1940 level, whereas wages were 61.9% above the prewar level. This spread in the dynamics of output and wages resulted in wages, in 1945, representing a considerably higher share of the production costs of coal.

An increase in the share of wages in production costs signifies — if it corresponds to an increase in labor performed — nothing but an increase in the share of living labor in total labor expenditures. However, an increase in labor productivity signifies a reduction in the share of living labor, with a simultaneous reduction in the combined outlays of living and congealed labor in the production of a unit of output. Therefore, an increase in the share of living labor in total labor outlays means, essentially, a reduction in the productivity of the labor of society.

Consequently, the need for output to rise more rapidly than the average wages of workers is determined by the fact that only on this condition is a real rise in the productivity of the labor of society possible.

In recent years, some economists have been suggesting a method of calculating the increase in workers' wages on the basis of factors in the growth of labor productivity for the period embraced by the plan. In this approach, all factors involved in increasing labor productivity, and more precisely, in output per worker, are divided into two groups. The first group of factors involves an increase in labor expenditures, and the second does not. The authors of this method assert that wages should rise only in connection with the first group of factors, in proportion to the increase in labor expenditures. Thus, in No. 1 of *Sotsialisticheskii Trud* for 1958, Comrade Aganbegian writes that "... the earnings of a worker should rise in accordance with improvements in the quality and increase in the quantity of the labor he expends."

In our opinion, this view is based on a mistaken interpretation of the behavior of the law of distribution in accordance with labor. In the first place, the law of distribution in accordance with labor regulates only the relationships between the pay of various workers or categories of workers, but does not determine the level of payment. The level of pay is determined and regulated by the operation of the basic economic law of socialism. In the second place, the quantity and quality of labor constitute the criterion for the payment of various workers only at any given stage, but cannot serve as the foundation for the dynamics of wages in different periods. Otherwise it would have to be contended that if workers' wages have doubled since 1940, this necessarily means a doubling of the labor they expended. On the other hand, inasmuch as the socialist system poses the problem of easing the workers' labor in every possible way, as expressed in the mechanization of labor and the shortening of the working day, it would have to be recognized that wages must decline. To cite the rising complexity of labor changes nothing, because complex labor also represents the expenditure of man's mental and physical energies. If we proceed from this method, we would have to conclude that under socialism each worker expends more and more mental and physical effort on production, and that this is what causes the increase in his wages. This contradicts the essence and the fundamental objectives of socialism.

In reality, under socialism, an increase in the wages of every worker takes place simultaneously with a reduction of expenditures of labor upon production. Therefore, to calculate the increase in wages in accord with the factors making for a rise in labor productivity is theoretically unjustified. Moreover, this analysis cannot be applied in practice. From 1940 to 1955 the productivity of labor in light industry rose by 65%, while in petroleum extraction it increased by 31%. On the basis of calculating the increase in wages in terms of the factors involved in raising labor productivity, one would have to conclude that wages in light industry should have risen at least twice as rapidly from 1940 to 1955 as in the petroleum extraction industry. If we pursue this method, we find that wages in the coal mines in 1955 should not have risen at all over the prewar years, as by that year labor productivity had increased only by 8%, and the miners' working conditions had been incomparably eased by mechanization.

At the present stage in the development of the economy, rates of increase in wages paid in various branches of industry reveal no regularities in connection with the measures carried out to adjust the wage picture in industry. This method will be invalid even after wages have been adjusted,

because when this has been done, wages in all branches will rise more or less evenly, except for allowance for the significance of particular branches of the economy at each given stage, and for changes in the conditions of labor in particular branches, as compared with others.

Consequently, wages must rise with increases in labor productivity, regardless of the factors causing the latter.

However, this does not mean at all that we can ignore the factors involved in the growth of labor productivity in determining wage increases in particular branches of industry and enterprises. If an increase in labor productivity in the given branch involves an increase in the expenditures of labor relative to other branches, this must inevitably be reflected in a more substantial rise in wages in the given branch. However, if a rise in labor productivity is accompanied by a diminution of expenditures of labor, wages must rise nonetheless, although to a smaller degree. This reflects the objective of socialism: to ease the workers' conditions of labor and improve their living standards. Only under such conditions will the workers be active champions and propagandists of technological progress, and will they struggle for the maximum possible utilization of machines and mechanisms.

The gap between the rates of increase in labor productivity and the wages of workers and employees in the economy as a whole should be determined, in the national economic plan, for each period separately, based on specific tasks in developing the production of means of production, reinforcing the country's defense capacity, developing public health, education, etc.

During the current Seven-Year Plan, the problems involved in adjusting the wage situation in the economy and raising the minimum monthly wage from 270-350 rubles in 1958 to 500-600 rubles in 1965 require a considerable increase in money wages. The rates of increase in money wages for 1959 to 1965 will be considerably higher than during the 5th Five-Year Plan. During the period, each 1% rise in labor productivity was accompanied by a 0.2% growth in money wages, while during the Seven-Year Plan it will be 0.5%.

The increase in wages in each individual branch should be determined in the plan within the limits of the total increase in wages projected, and should be based on uniform increases for branches, but with due consideration for changes in the conditions of labor in each branch. It is understood that this will apply only after the measures to adjust the wage situation in industry have been realized.

As of the present moment, the reorganization of wages, providing a considerable raise in wage rates and a simplification of the wage system, has already been carried out in a number of leading branches of heavy industry: ferrous and nonferrous metals, the chemical and the coal industries.

For example, in the coal industry of the Donbas, the result of the adjustment of wages has caused the wage rates of workers to rise by 70-75%, and the number of job classifications for underground work has been reduced by four-fifths. The improvement in the organization of labor and wages in the Donbas has had fine results in production. Whereas, during the final years of the 5th Five-Year Plan, and in 1956, the plans for coal production in the Donbas were not generally fulfilled, the plan for 1958 was surpassed by 2%. The number of mines that do not meet their production plans has diminished. In 1956, 68% of the Donbas mines failed to meet their output quotas; in 1957 the figure was 51%, and in 1958 it was 40%. Improvement in mine operation also made for a proper relationship in the rates of increase in labor productivity and wages. In 1958 the wages of workers in the Donbas rose by 1.1%, and labor productivity by 3.5%.

Preparations are now under way for conversion to a shorter working day and to a new schedule of payments for the labor of the working people in the machine-building, petroleum and gas industries. The new system of payments to labor will differ substantially from that now in effect. For example, at present 34 enterprises under the Administration of Machine Building of the Moscow Oblast Economic Council have a total of 35 different wage scales and 49 rates for the first wage grade, although the difference between the highest and lowest rates is only 42 kopecks. Under a government decision, all the machine-building enterprises under the Moscow Oblast Economic Council will have a single wage scale. The number of wage rates for the first grade will drop from 49 to 8. The proportion of the worker's earnings represented by base pay will rise to 70-75%.

The adjustment of the industrial wage system will make for a further rise in labor productivity.

Although labor productivity is increasing more rapidly than wages in a whole series of enterprises and branches of industry, this still does not mean that the proper relationship has been established between the rates of increase in labor productivity on the one hand, and wages on the other. It is therefore necessary to determine separately for each branch of industry and enterprise, the degree to which the rise in labor productivity must exceed the increase in wages. In this connection it would be desirable that the plan state not the average wage, but a coefficient indicating the relationship between the growth in labor productivity and wages. For example, if it is planned to increase labor productivity in some branch by 50%, and the average wage by 30%, the plan for this branch of industry should embody the growth in labor productivity and the coefficient 0.6. This coefficient will mean that average wages cannot rise more than 0.6% for each per cent of increase in labor productivity. The establishment of this coefficient does not contradict the principles set forth above, as these coefficients will be modified each time the plan is drafted. This procedure would prevent money wage increases from exceeding labor productivity increases, and would avoid overexpenditures of the wage fund.

The harmful practice of overexpenditures of the wage fund is still pursued by some of our industrial enterprises. For example, 52 enterprises of the Stalinugol Combine of the Stalino Economic Council alone overspent a total of more than 46,000,000 rubles in 1958.

Monitoring of proper expenditures of wage funds is of particular importance during the present Seven-Year Plan. Should there be errors in planning and shortcomings in the organization of labor, the significant increases in wage scales and average wages could result in substantial overexpenditures on wages and disruption of monetary circulation in the country. In order to prevent this, strict adherence to the planned relationship between the increase in labor productivity and wages must be maintained.

Only if this is done will it be possible successfully to carry out the tasks scheduled by the 21st Congress of the CPSU with respect to the development of production and the building of communism in our country.

Literature Cited

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M. Milaganov:

Problems of Adjusting the Remuneration of Labor of Personnel Employed in Non-Productive Fields

The Seven-Year Plan provides for completing in 1959-1962 the adjustment of the pay of wage and salaried workers in all branches of the national economy begun in recent years.

Partial measures for introducing new schemes of salary rates for personnel in non-productive fields are already being taken. For instance, new systems of payment have been established for people employed in procurators' offices and judicial bodies, chairmen and secretaries of town and rural Soviets, certain categories of art workers, workers employed in economic councils, state planning organizations of the republics, scientific and technical committees, and a number of other institutions and organizations. In all, since the 20th Congress of the Party new systems of payment have been introduced for approximately 500,000 persons employed in the non-productive branches of the national economy.

The role played by the non-productive sphere in carrying out the tasks of building communism, tasks set by the 21st Congress of the CPSU, has grown considerably. Today this field has some 13 million persons employed in establishments or other organizations of science, education, health protection, art and culture, housing, municipal and everyday service establishments, in the system of state administration, finance and credit, courts and other legal bodies. In connection with the immense tasks involved in the development of science, education, the health services and culture during the seven-year period, and also in connection with the vast housing construction and improvement of everyday services for the population, the proportion of persons employed in the above-mentioned branches of the non-productive sphere will increase considerably in relation to the total number of wage and salaried workers. All the work done in adjusting the pay of workers employed in the non-productive sphere is to be subordinated to the task of complete and efficient utilization of the labor of this large army of wage and salaried workers in the interests of Soviet society as a whole.

A characteristic feature of the organization of the pay of wage and salaried workers in the non-productive fields in the earliest days of the Soviet government was the unification of salary and wage rates and the limiting of maximum earnings. As early as 1917 the Council of People's Commissars of the RSFSR adopted a decision "On the Remuneration of People's Commissars, Higher Categories of Office Employees and Officials." Later decrees standardized the pay of salaried workers. To illustrate, the decree "On the Pay of Salaried and Wage Workers Employed in Government Offices" adopted on October 18, 1918, established four wage scale groups with three differentiated categories within each group for salaried workers in Moscow.

An important part in regulating working conditions and pay for people employed in the non-productive fields was played by the decree passed by the Council of People's Commissars in 1920 entitled "General Statute on Wages,"

which regulated working hours, quotas of labor productivity, the method of classifying wage and salaried workers according to wage categories, conditions for applying piece rates and bonuses, pay for overtime, business trips, spoilage and other problems of labor and wages.

In 1922 a uniform 17-category wage scale and rate-qualification guide was worked out and introduced into all branches of the national economy and applied to all categories of workers. The purpose of regulating wages by means of a uniform scale and rate-qualification guide at that time was to raise, in the shortest possible time, the general wage level on the basis of a more correct utilization of labor and to get skilled specialists to return to work at their specialty.

As the national economy became restored the positive role of the uniform scale began to decline. By 1924 the scale was being disregarded more and more and special supplements began to be introduced to cover "unaccounted-for working time," harder working conditions, skill, and so on. For this reason, the Council of People's Commissars of the USSR adopted in 1925 a special decision "On Standardizing the Pay of Salaried Workers in Government Offices." This standardization consisted of setting up a list of positions and their characteristics, fixing uniform job titles for all positions that were similar in nature and in the amount of work performed, and in fixing uniform staffs and salaries for each position. In determining the scale of salaries the principle applied was equal pay for workers of equal responsibility and qualification in all establishments, but with due consideration for the source of financing and the locality concerned. As a uniform scale could no longer embrace all salaried workers in all non-productive fields, gradually separate regulations for paying workers in the different fields began to be worked out and applied. This made it possible to take better account of the specific character of each field, and since that time measures for changing conditions of payment have been put through in the individual non-productive fields by the proper departments.

In carrying out the adjustment of salaries in the non-productive fields it is necessary to make use of everything of value in the practice of the 1920's, when uniform pay for workers in the different fields was provided for, and in the practice of later years when the specific character of the field was taken into account more fully.

Today there is much disparity in the pay of workers of the same qualification performing similar work. This is due to the absence in many fields of standard schemes of salary rates and the lack of system in the nomenclature of jobs. Departments which have salary schemes have their own differentiated scales based on the person's education and length of service, which leads to disparity in the pay of people of similar qualifications. There is no uniformity in the pay of people of related occupations, above all of administrative and managing personnel. Besides, in the

non-productive fields more complicated work is often paid at the same level as simple work, or even less.

For the purpose of eliminating disparity and improving the correlation between the amounts of pay according to category of personnel, it is advisable to institute standard salary schemes and a uniform job nomenclature. Such standard schemes may be established for all offices or organizations, irrespective of what department they belong to. In turn, the labor of workers, engineers and technicians employed in enterprises, shops or sections belonging to establishments or organizations in non-productive fields should be paid at the rates (scales) fixed for workers, engineers and technicians in the corresponding branches of production.

In reorganizing the pay of workers in related occupations (administrative and managing and service personnel), it is necessary to ensure uniformity in the pay of workers holding similar positions, irrespective of what department or branch they belong to. This can be achieved by introducing a uniform scheme of salary rates for them, as the nature and volume of their work are approximately the same in all fields.

The results of the labor of people working in the non-productive fields cannot be calculated to the same degree as of those working in the spheres of material production. For this reason, in examining the tasks involved in reorganizing the pay in these branches, questions of differentiating occupational salary rates come to the fore.

First of all, it is necessary to solve the problem of the ratio between the pay of workers employed in non-productive and productive fields of the national economy. Historically, people employed in the non-productive fields have been paid considerably less than people of the same qualification employed in the field of material production. For example, doctors and teachers have been paid less than engineers, doctors' assistants and kindergarten teachers less than technicians, and so on.

The basic criterion in determining the pay level of people employed in different fields but possessing equal qualifications should be the working conditions. For this reason, elimination of the disparity between the pay of workers employed in the non-productive and those employed in the productive fields, when the disparity is not due to differences in working conditions, is one of the major tasks in the reorganization of pay in the non-productive fields.

In connection with this there arises the question of what yardstick should be used to measure the level of qualification of workers employed in the non-productive and the productive fields. A person's standard of qualification depends on the period of general and special education required before one can perform the particular work, and on the experience gained in doing the work. The time it takes to study and the time it takes to gain experience are the things that make up the qualification, and the longer the time the higher the qualification; where the time is equal, the qualification is equal. For instance, the time it takes to train a teacher and an engineer with a higher education are approximately the same, and the time it takes to train a doctor is longer.

Proceeding from the above, the main occupations in the fields of education, health and a number of other non-productive fields can be combined into three large groups: jobs which require a general education and a short period of special training (junior medical personnel in the health service); jobs requiring a special secondary education (nurses and doctors' assistants in the health service, and teachers and music instructors in kindergartens); jobs requiring a higher education in the particular specialty

(doctors in the health service and teachers in the field of education). The first group of jobs corresponds to the qualification of timekeepers and a number of other clerical workers in the productive fields. The second group corresponds in qualification to those of technicians in production fields, and the third to the qualification of engineers. The minimum salaries of people within these groups should therefore correspond, respectively, to the minimum salaries of office employees, technicians and engineers.

In constructing a system of occupational rates for jobs in the productive and non-productive fields there are important differences to be considered. An engineer who has raised his qualification can hold the job of a senior engineer or section superintendent, but a teacher who has raised his qualification remains a teacher. The same applies to a doctor; if he has raised his qualification he becomes a better doctor, but still only a doctor. That is why a correct solution of the question of differentiating salaries within the particular occupation — that of teacher, doctor, and so on — is very important for these categories.

Unlike the case in industry, this differentiation for people employed in the non-productive field is established by increasing the salary on the basis of the years of service, since the qualification of teachers and doctors rises with the accumulation of experience. For instance, for 5-10 years of service the salary is raised by 10%, and after ten years by 20%. At the same time, under the existing system of remuneration, individual differences among teachers and doctors in acquiring skill are not taken into account, though some spend more time and effort on improving their professional skill, are more capable, and require less time to raise their qualification than others. Because of this the numerous proposals urging the creation of the positions of senior teacher and senior doctor merit attention.

In a number of other professions (surgeons, theater workers, orchestra players, cinema workers, editors, and so on) their qualification depends largely on individual ability. To take this into consideration it is advisable to give up differentiation of salaries in accordance with length of service and to base the pay on categories to be assigned them (such as artist of the 3rd, 2nd, or 1st category, and so on). Of course, the length of service should be taken into account when assigning the particular person one or another category.

After the qualification groups with respect to salaries have been determined, the next question is to fix the salaries of workers of unequal qualifications. A main task in reorganizing salaries is to raise the pay of the lower-paid personnel and reduce the gap between the pay of higher and lower-paid categories.

In the non-productive fields the salaries of specialists with a higher education are today roughly triple those of junior service personnel. By adjusting salaries and introducing a minimum salary of 400-450 rubles a month the gap can be reduced by 50-60%, and if the minimum pay is set at 500 to 600 rubles a month the gap will be still less. Besides, the salary of lower-paid categories will rise, due to the higher labor productivity that will come as a result of mechanization and better organization of work.

There should be special discussion of the question of establishing categories for paying heads of establishments and organizations on the basis of the volume, complexity and conditions of work. Concrete salary rates classified for groups of positions and their differentiation according to length of service and education, as well as for the category of the establishment and organization, are indicated in the standard salary schemes for each position in the individual fields. In setting up these schemes it is necessary to

proceed from the new standard structure of establishments and organizations made up by taking into account progressive work quotas for staffs. Reorganization of the system of pay in non-productive fields is therefore inseparably linked with the realization of measures directed to improving the structure of the establishments and organizations. This will make it possible to adjust the pay of a number of categories of personnel (administrative and managing and service personnel, and so on) within the limits of the existing wage fund.

To provide a material incentive for simplifying the structure of offices and organizations and reduce the cost of maintaining people employed in the non-productive fields it would be advisable to use part of the savings of the wage fund for bonuses to be given to personnel who have displayed initiative and who have undertaken an extra amount of work. It goes without saying that a condition for giving bonuses must be a higher quality of work of the particular office or organization.

Along with the general principles underlying the organization of pay for the non-productive fields, each one has its own specific problems. In education, special attention should be given to establishing more correct relationships between the pay of teachers employed in general educational schools, instructors of special secondary schools and teachers and nurses of kindergartens and children's homes. Reorganization of the system of education and training in conformity with the Law on Strengthening the Links Between the School and Life and the Further Development of Public Education presents higher demands with respect to the quality of teaching, the qualification of teachers, masters and instructors in the professional and technical disciplines. Proper organization of pay is destined to play an important part in raising the qualification of educational workers. Today, teachers' pay does not correspond to their level of qualification, the complexity and responsibility of their work. Teachers' salaries are low and are excessively differentiated on the basis of many factors: the level of education, the length of work as a teacher, the group of classes taught, the importance of the subject, the location and type of school.

With respect to their level of education, salaries of teachers of the 5th to the 10th grades have been fixed, as a rule, under several categories, on the basis of higher, incomplete higher, special secondary and general secondary education. At the same time, for elementary school teachers salaries are provided under two categories: teachers with a special secondary or general secondary education. Therefore, teachers with different qualifications working in elementary schools receive the same salaries. Through the reorganization of the system of public education it is planned, in the years immediately ahead, to attract as teachers for elementary schools mainly persons who have a higher pedagogical education. However, the existing salaries of elementary school teachers do not stimulate them to raise their qualifications. Apparently, the principle of differentiation in salaries on the basis of the level of education will have to be adopted for all categories of teachers.

Important changes in curricula will take place in connection with the reorganization of the educational system. In this connection it is hardly advisable to divide the disciplines into basic and non-basic and to keep the existing differences in the monthly salaries of teachers which are based on the importance of the subject. The time it takes to prepare for conducting lessons and the time required for extracurricular work in the different disciplines can be taken into consideration by setting up differentials in the hour loads.

Under the present statute, salaries of teachers in rural schools are lower than those of teachers in urban schools. Such a system of pay does not provide a material incentive for teachers to work in the countryside and makes it difficult to staff rural schools with qualified teachers. It would be more correct to establish uniform salaries for teachers irrespective of the location of the school.

Reorganization of the system of public education is linked with a considerable extension and improvement of correspondence-school courses and spare-time education in evening schools for young workers and for rural youths. Correspondence and evening schools should have highly qualified staffs of teachers and instructors. However, at the present time teachers of evening schools for young workers are in a worse position with respect to salaries than day-school teachers. This adversely affects the staffing of these schools with teachers and is a serious impediment to the development of correspondence course education. Teachers working in evening schools for young workers and rural youth should be placed on the same footing, as regards salaries, as teachers employed in daytime general educational schools.

Because of the low salaries of kindergarten teachers there is considerable turnover in their staffs. For this reason this important and responsible work is often entrusted to inadequately prepared persons, and this has an adverse effect on the pre-school education of children. In view of the importance and complexity of working with children of pre-school age, kindergarten teachers should be paid the same salaries as elementary school teachers.

There is great disparity in the pay of teachers of special secondary schools. The existing salaries of teachers of general educational subjects in these schools are lower than those of teachers of regular schools. This disparity should be eliminated by establishing uniform salaries for teachers of general educational subjects in special secondary schools and teachers in regular secondary schools.

The question of pay for teachers of special and general technical disciplines in special secondary schools should be settled in a special way. Teachers of this category must combine the skill of a pedagogue with deep knowledge of production and a specialty, regularly keep up with the development of the particular branch of knowledge and enrich the course with the latest achievements of science and engineering. Highly-qualified specialists from industry are, as a rule, taken on to teach special subjects. Hence the pay of these teachers should be somewhat higher than that of teachers of general educational subjects; it should be the same as that of qualified specialists in production.

While in the field of education the main task in the reorganization of pay is to remove unjustified differentials, in the health service field the task with respect to pay is different. Salaries of doctors of all specialties are not sufficiently dependent on the complexity, responsibility and strain of the work. For instance, all doctors employed in general medical institutions (except staff doctors of district polyclinics) are paid uniform salaries despite great differences in the working conditions and responsibility in the performance of their duties. The most complex and responsible work is that of surgeons, no matter what field they specialize in. Under the existing practice, surgeons are assigned categories on the basis of their qualification. The qualification, in its turn, is determined by taking into consideration the degree of complexity of the range of operations which a particular surgeon is permitted to perform. For this reason, it would be advisable, by way of exception, to set surgeons' salaries on the basis of the category given them.

The difference between the salary of a district polyclinic doctor and doctors working in hospitals is not great today. The former have to move about the district they serve and personally diagnose and treat patients under more difficult conditions than in a hospital, and to take preventive measures. In view of this, it is advisable to single out the pay of these doctors more than has been done up to now, putting them in a preferential position as compared with doctors working in hospitals.

Under the present regulations all doctors working in rural localities receive a higher salary regardless of the nature of the work they do. This principle reflects but one formal element, namely, the location of the medical institution; it does not take into consideration the important differences in the working conditions of doctors of different specialties. However, the conditions of work of doctors employed in rest homes, sanatoriums, kindergartens and other similar institutions in rural localities do not differ from the working conditions in similar urban institutions. On the other hand, the complexity of the work and the working conditions of doctors in rural district hospitals differ substantially from working conditions in cities. The work of doctors of rural district hospitals serving several scattered communities involves great responsibility, requiring an exceptionally broad professional specialization. Owing to this, salaries of doctors of rural district hospitals should be singled out to a greater extent than is provided for under existing conditions.

Important tasks will have to be carried out in adjusting the pay of workers employed in housing and municipal services. There is a great deal of disparity in the pay of this group of workers due to departmental differences, the great number of scales and rates and schemes of pay, categories and groups of organizations, and so on. For instance, there are more than 30 regulations on bonuses and more than 50 schemes of occupational rates in the system of municipal services alone.

In the main, workers employed in municipal services are paid under a wage scale. The chief defect in their system of payment is the low proportion of basic rates in earnings and the resulting numerous extras. Inasmuch as the labor of workers employed in municipal services does not differ essentially from the labor in industrial enterprises, they could be paid under the scales and rates fixed for the branches of material production. Thus, workers employed in building-repair organizations and those employed on building roads and bridges, on repairs of streetcar tracks, could be paid at the same rates as building trades workers are paid; workers employed in auxiliary enterprises of building-repair organizations (saw-mill shops, concrete making, and so on), at the rates in effect in the building materials industry; workers employed in machine-repair shops, at

the rates in effect in the machine-building industry, and so on.

Removal of the elements of levelling and disparity in the pay of those working in government service should proceed simultaneously with improvement of the structure of the state machinery, elimination of overstaffing, and bringing management closer to production itself. Today there is no organizational unity in the structure of the state apparatus. Many regions have no public education or health departments, while other regions that are smaller have them. The staffs of Executive Committees of a number of towns and cities that are directly subordinate to their republic's administration have copied the staffing system of district centers; and when a town is transferred from the jurisdiction of the region to that of the district, the administrative staff is doubled, and so on.

The nomenclature of jobs is excessively split up and numerous. This is sometimes done for the purpose of raising rates. For instance, in the administrative machine of districts there are today more than 140 occupational titles and a corresponding number of rates.

The nature of the duties, responsibility of the work, and the complexity of the functions differ sharply in the various sectors of the administrative machine. For this reason it is advisable to distinguish six main groups of offices and organizations on the basis of occupational salary rates: all-Union institutions, republican, district, city, regional establishments, as well as town and rural organizations. Of great importance is the division of the establishments of each link into pay groups according to the volume of work done, to be determined by the size of the economy of the republic, district or city, and fixing proper relationships in paying those employed in the administrative machine and persons engaged directly in enterprises, schools, hospitals, and so on.

In adjusting pay the specific conditions of work of the individual administrative agencies (the economic councils, for instance) should be taken into account. For paying workers employed in these organizations, special schemes covering salaries should be provided on the basis of the volume of industrial output and construction in the particular economic and administrative area.

Adjustment of wages and salaries in the non-productive fields is a complex and responsible job, and it is therefore necessary to prepare thoroughly for carrying through this important measure. It is necessary to work out standard schemes of pay scales, a uniform nomenclature of jobs and a more precise structure of offices and organizations; progressive work quotas for staffs should also be prepared and internal sources sought to cover the outlays for introducing new conditions of pay.

Fundamentals of Labor Law of the USSR

and the Constituent Republics: A Draft

The great October socialist revolution freed the peoples of Russia from the yoke of capitalism and fundamentally changed the nature of the social organization of labor in our country. After centuries of forced labor for their exploiters, the working people gained the opportunity to work for their own benefit, their own social order.

In the USSR, the foundation of the social organization of labor is the socialist economic system and socialist property in the tools and means of production, which have become firmly entrenched as the result of the elimination of the capitalist economic system, the abolition of private property in the tools and means of production, and the elimination of exploitation of man by man.

The Soviet social order has assured all the conditions required for the appearance and flourishing of a new, socialist attitude toward labor among the working people. In a socialist society, moral stimuli to work for the good of society are acquiring ever greater significance. A most important manifestation of the new attitude toward labor is the active participation of the working people in the management of industry and the all-embracing socialist competition, the object of which is to increase the productivity of labor and to further multiply the wealth of society.

Communist forms of labor are flourishing ever more widely. Along with the gradual erasure of significant differences between mental and manual labor, and with the all-round development of man, conditions are being created for transforming labor into the primary vital necessity of all the members of society.

A major role in the inculcation of a Communist attitude toward labor, in involving workers and office personnel in participation in the management of industry, in raising their living standards and level of culture is played by the trade unions, which become, for millions of working people, a genuine school of administration and management, a school for communism.

Under the USSR Constitution, citizens enjoy the right to a job, that is, the right to work which is paid in accordance with its quantity and quality is guaranteed, and they are also assured the right to leisure, the right to material security in old age, in case of illness or loss of capacity to work. Citizens of the USSR enjoy the right to an education. Education in all its forms is carried out on the basis of a tie between study and life, study and production.

Citizens of the USSR are assured equality at work regardless of nationality and race.

Women are assured the right to a job, equal pay, leisure, social insurance and education, on a par with men. The government enforces the protection of the interests of the mother and child.

In the USSR labor is a duty and a matter of honor for each able-bodied citizen, in accordance with the principle: "He who works not, neither shall he eat." The principle of

socialism: "From each according to his ability, to each according to his work," is realized in the USSR.

Every citizen of the USSR is required to observe labor discipline, to conduct himself honorably with respect to his duty to society, to safeguard and strengthen the socialist property of society.

The Fundamentals of Labor Law of the USSR and the Constituent Republics embody in the form of a unified act, valid for the entire Union, the most important legislation on labor in effect at the time of the entry of the USSR into the period of all-out building of a Communist society, and lay down a number of new propositions with respect to further improvement in the conditions of labor.

Resting on these Fundamentals, the legislation of the constituent republics will provide regulation of all aspects of labor relations, with due allowance for the distinctive characteristics of each republic.

I. General Propositions

Article 1. The Fundamentals of Labor Law of the USSR and the Constituent Republics apply to all workers and office personnel.

Article 2. The labor of members of agricultural and industrial cooperatives is governed by the regulations adopted by these cooperatives in accordance with legislation in that field.

Article 3. Labor contracts and agreements contradicting the legislation of the USSR and the constituent republics are invalid.

II. The Collective Agreement

Article 4. The factory, plant or local committee of the trade union concludes a collective agreement, on behalf of the workers and office personnel, with the management of the enterprise.

Article 5. The collective agreement sets forth the mutual obligations of the management and the workers and office personnel with respect to the fulfillment and overfulfillment of production plans, improvements in the organization of production and labor, increases in labor productivity, proper application of the established systems of payment for labor, strengthening of labor discipline, upgrading of personnel through improvement of skills, improvement of safety, and provision of housing and of cultural services and everyday living facilities for workers and office personnel.

III. The Labor Contract

Article 6. The labor contract is an agreement between the wage or salary earner and the enterprise or office, under which the former undertakes to perform work in a particular skill, trade or post, and the enterprise or office undertakes to pay wages and provide the conditions of labor provided in labor law, and in the collective agreement and the labor contract.

Article 7. The management of an enterprise or an

* Editor's note: The publication of this draft of a new labor law was accompanied by an announcement that, following discussion, it would be presented for ratification to the Supreme Soviet of the USSR.

institution does not have the right to require a worker or office worker to perform work not covered in the labor contract or work involving clear danger to life or not in accord with labor law.

Transfer to another permanent job in the same enterprise or institution, or to permanent work in another enterprise or institution or another locality (even if this is due to a move by the entire enterprise or office), must have the agreement of the worker or office worker.

Article 8. If production conditions require it, the management of an enterprise or institution has the right to transfer workers and office personnel for not more than one month per calendar year to work not specified in the labor contract, in the same or in another enterprise or institution in the same locality, at pay not lower than the average earnings in the work formerly performed. In exceptional cases, subject to agreement with the factory, plant or local committee of the union, the term of such transfer may be extended, but not to more than three months in the calendar year.

In case of a shutdown the workers and office personnel are transferred, with due consideration for their skills and trades, to other work in the same enterprise or institution for the full period of the shutdown, or to another enterprise or institution in the same locality for not more than one month. When transferred to lower-paid jobs due to shutdowns, workers and office personnel who fulfill their output quotas are paid their former average earnings, and workers and office personnel who do not meet their quotas or who are shifted to time-rate jobs are paid the base wage (or salary) of their previous jobs.

Article 9. Labor contracts may be concluded either for:

- (a) an indefinite term;
- (b) a definite term not exceeding three years;
- (c) the term required for completion of a given project.

Article 10. Workers and office personnel have the right to cancel labor contracts concluded for indefinite terms upon giving 12 working days' notice in writing to the management of the enterprise or institution.

A fixed-term labor contract must be cancelled before expiration on demand by the worker or office worker if he is elected to an elective post or in case of illness or incapacitation preventing performance of the work under the contract, or if the management violates labor law or significant conditions of the labor contract, or for other weighty reasons.

Article 11. A labor contract of indefinite term or a fixed-term labor contract may be cancelled by the management of the enterprise or institution before expiration only in the following instances:

- (a) liquidation of the enterprise or institution, or reduction in staff;
- (b) cessation of the work for the performance of which the worker or office worker was engaged;
- (c) determination that the worker or office worker is unsuitable for the given post or the given job;
- (d) consistent failure on the part of the worker or office worker, without substantial reason, to carry out the responsibilities assumed by him in the contract or the office or factory regulations;
- (e) commission by the worker or office worker of a crime pertaining to his work at the given enterprise or institution, as determined by conviction in the courts after completion of all due process, or the serving of a sentence of more than two months;
- (f) absence from work without valid reason;
- (g) failure to appear for work for more than four consecutive months due to temporary incapacitation

(other than pregnancy and post-natal leave);

(h) return to the job of a worker or office worker who had held it previously.

Article 12. The management of an enterprise or institution may not abrogate a labor contract as provided in Article 11 without the agreement of the factory, plant, or local committee of the union, except for managerial personnel in posts specified in a special list.

IV. Working Time and Leisure Time

Article 13. The working day of workers and office personnel at enterprises and institutions shall not exceed 7 hours, nor the work week 40 hours.

In particular branches of industry it is permissible to establish a 5-day work week (5 working days and 2 days of rest) and 8-hour day.

Note: The changeover of all workers and office personnel to the 7-hour day is to be completed in 1960, and the changeover of workers and office personnel working a 7-hour day to a 40-hour work week is to be completed in 1962.

Article 14. The work day prior to the weekly day of rest and prior to legal holidays shall not exceed 5 hours.

Where the 5-day week is in force, a full day shall be worked prior to the weekend, except that a day of not over 6 hours shall be worked on the day before legal holidays.

Article 15. A shortened work day is established:

- (a) for workers and office personnel 16 to 18 years of age, who shall work a 6-hour day, and for persons between 15 and 16 years (see Article 54), who shall work 4 hours;
- (b) workers and office personnel doing jobs that are heavy or harmful to the health shall work not more than 6 hours per day.

In addition to the foregoing, a shortened work day shall apply for certain categories of mental workers (teachers, physicians, and some others).

Article 16. Hours of work on night shifts shall be one hour shorter than during the day, except for workers and office personnel on short work days (less than 7 hours).

In exceptional cases, the night shift may be as long as the day when this is necessitated by the conditions of production (particularly in continuous processes), and also where the five-day work week is in force (with 5 working days and 2 days off).

Night is defined as the hours from 10 p.m. to 6 a.m.

Article 17. The management of an enterprise or institution enjoys the right to reduce the work day at the request of individual workers and office personnel whose capacity to work is impaired, pregnant women, persons caring for young and other unemployable members of their families, and persons who are both working and going to school. In these instances, payment is in proportion to the time worked or in accordance with output.

Article 18. The general rule covering overtime is that it is not permitted. The management of an enterprise or institution may require overtime only under exceptional circumstances provided for by the legislation of the constituent republics.

Overtime worked under these conditions must have the approval of the factory, plant, or local committee of the trade union.

Overtime must not exceed 4 hours in two consecutive days or 10 hours per month for any individual worker of office worker.

Article 19. Workers and office personnel are provided breaks for a total of not more than two hours for meal and rest, this time not being counted as working time.

Article 20. All workers and office personnel shall have

a weekly period of uninterrupted rest of not less than 42 hours duration.

The day of the week to constitute the weekly day of rest is established by the legislation of the constituent republics.

Article 21. Work in enterprises and institutions is prohibited on the following legal holidays:

January 1 — New Year's Day;

May 1 and 2 — International Labor Solidarity Day;

November 7 and 8 — Anniversary of the Great October Socialist Revolution;

December 5 — Anniversary of the USSR Constitution.

The only types of work permissible on holidays are those the interruption of which is impossible for technical reasons of production (continually-operating enterprises and institutions), or for reasons of services to the population, as well as urgent repairs and loading and unloading operations on the railroads and water transport.

Article 22. All workers and office personnel are granted annual vacations at average earnings and with retention of their jobs and classifications.

Vacation schedules are determined by the management of the enterprise or institution in agreement with the factory, plant, or local committee of the trade union.

Article 23. The annual basic vacation for workers and office personnel is not less than 12 working days. Workers and office personnel under 18 years of age are granted an annual basic vacation of one calendar month, to be granted during the summer.

Article 24. The following shall have extra vacation time: workers and office personnel on jobs with harmful or heavy conditions or labor, or in localities with severe climatic conditions; workers and office personnel of high seniority in certain branches of the economy; personnel holding selected posts.

Article 25. The management of an enterprise or institution may grant a short leave without pay to a worker or office worker requesting this for family or other substantial reasons.

V. Wages, Benefits, and Compensations

Article 26. The labor of workers and office personnel is paid in accordance with its quantity and quality.

The monthly wages of a worker or office worker shall not be less than the established minimum.

Article 27. In addition to wages, workers and office personnel shall receive, at government expense, social insurance benefits, free medical care, and free education, in addition to other benefits. Mothers of large families and unmarried mothers shall also receive government aid.

Article 28. Workers and office personnel shall be paid on a piece or time basis.

Wages and salaries are determined in each branch of industry on the basis of basic wage rates, and the earnings of office personnel are based on occupational salary rates.

Increased wage and salary rates shall be established for underground work or work under harmful or heavy conditions of labor.

Bonus systems may be instituted to reinforce the material incentive to workers and office personnel for fulfillment and overfulfillment of government plans, increasing production, raising the productivity of labor, introduction of new equipment, and reduction of the costs of production.

Article 29. In piece wage payment, piece rates are determined on the basis of basic wage rates and work output quotas.

Quotas are determined and revised by the management of the enterprise or institution by agreement with the factory,

plant, or local committee of the union, with due consideration of the level of technology, the organization of production, and the most advanced work methods.

Uniform quotas covering entire branches of industry or spanning several branches may be established for identical types of work.

Article 30. Overtime work is paid at time-and-one-half for the first two hours, and at double time for subsequent hours.

Holiday work is paid at double time, except that, if the worker or office worker agrees, it may be compensated for by another day off.

Article 31. As night shift personnel work a reduced shift, they shall receive for each hour of night work a rate one-sixth higher per hour in enterprises with a normal 7-hour day, and one-seventh higher in enterprises with an 8-hour work day.

In cases in which the length of the work day is not reduced, the differential paid in places on 7 and 8-hour work days shall be one-seventh of the hourly rate, and one-fifth of the hourly rate of the particular worker or office worker in places on a normal 6-hour day.

Article 32. Wages and salaries shall be paid not less often than twice monthly.

Payment shall be made on working time, and on the job.

Article 33. If failure to fulfill the work quota is due to causes beyond the control of the worker or office worker, payment is based on the quantity and quality of work done, but at not less than two-thirds of the basic rate.

If the work produced is damaged for reasons that are not the fault of the worker or salaried person, payment is at not less than two-thirds of the basic rate, and if work stops due to causes that are not the fault of the worker or salaried person, the time is paid for at not less than one-half of the basic rate. Work that is partially damaged due to the fault of the worker or salaried person is paid for at a reduced rate. Fully damaged work due to the fault of the worker or salaried person, and shutdown time similarly caused, is not paid for.

Article 34. Workers and office personnel released from their jobs as a result of election to the Soviets of Working People's Deputies, as well as to trade unions and other social organizations, are guaranteed their jobs back, or new jobs at the same level, upon completion of their terms in office.

Article 35. Workers and office personnel are guaranteed their jobs (or posts) and average earnings for time spent in performing governmental and organizational responsibilities (when these are responsibilities that may, under the law, be performed during working time).

Workers and office personnel are assured their jobs (or positions) and half their average earnings during periods of military refresher service, regardless of the allowances received during this service.

Article 36. Workers and office personnel shall be reimbursed expenditures involved in travel on business, transfers and assignment to work in another locality.

Article 37. Damage incurred by an enterprise or institution due to the fault of workers or office personnel shall be made good by the persons responsible, but to a sum not greater than one-third of a month's basic rate.

Workers and office personnel may be held to financial account for the full cost of damage that is their fault (more than one-third of the basic rate) only in exceptional circumstances.

The loss is recovered by withholding from the wage or salary, on order of the management of the enterprise or institution. If the worker or office worker protests,

withholding shall not proceed, and the question of recovery of the loss is examined, if the management initiates this step, by the Labor Conflict Committee, whereas if the matter at issue is repayment of the full loss (under the second paragraph of this article), it goes to the courts.

Article 38. Any portion of wages may be withheld only in cases covered by existing legislation.

Total withholdings may not exceed 20% of each pay check, except that 50% may be withheld, less taxes, if withholding is for family maintenance purposes or to reimburse losses due to thefts, embezzlement or appropriation of socialist property.

No portion of dismissal pay or compensation payments may be withheld.

Article 39. In cases where this is provided for in the legislation of the constituent republics, workers and office personnel who have been dismissed shall be paid dismissal pay on the basis of their average earnings for 12 working days, or shall be given that much notice of dismissal by plant or office management.

VI. Labor Discipline

Article 40. Work rules at enterprises and institutions are determined by management in agreement with the factory, plant, or local union committee, on the basis of the standard rules approved in the established procedure.

Article 41. Workers and office personnel are rewarded for good work by commendations, bonuses, valuable gifts, scrolls of merit, and other procedures. In appropriate cases, workers and office personnel are commended to superior bodies for rewards.

Rewards or recommendations for rewards by higher bodies are made by enterprise or office management, with the concurrence of the factory, plant, or local committee of the trade union.

Article 42. Violations of labor discipline are punished by plant or office management by penalties established in the work rules.

The management may, instead of inflicting a disciplinary penalty, submit the matter of violation of labor discipline for consideration by a social organization.

VII. Safety and Health

Article 43. The management of all enterprises and institutions is required to provide healthy and safe working conditions for its workers and office personnel, and to take steps to prevent accidents and illnesses.

The design, construction and operation of all enterprises must be in accordance with established safety regulations and industrial sanitation.

Safety engineering regulations shall be established by the Councils of Ministers of the constituent republics, the ministries and departments of the USSR and the constituent republics jointly with the central committees of the trade unions or the All-Union Central Council of Trade Unions.

Industrial sanitation regulations are established by the USSR Ministry of Public Health in concurrence with the All-Union Central Council of Trade Unions.

Article 44. No enterprise (or shop) shall be opened, put into operation or moved to another structure without the permission of the appropriate agency of the labor union and the agencies of government sanitary and engineering inspection.

Article 45. Special clothing, footwear and safety appliances shall be issued free, and in accordance with the established procedure, to workers and office personnel on

harmful or dangerous jobs, dirty jobs, or jobs performed under special temperature conditions.

Article 46. Milk or other special food shall be issued without charge to workers and office personnel on jobs with unhealthy working conditions.

Soap shall be issued without charge on dirty jobs, and on jobs where the skin may be affected by harmful substances, neutralizers or removers of these substances shall be issued free.

Article 47. The managements of enterprises and institutions shall conduct medical examinations, in advance and periodically thereafter, of workers and white collar personnel on underground jobs, jobs with harmful, heavy or dangerous conditions, jobs involving the movement of transport facilities, and also on jobs in food enterprises and enterprises involved in sanitary and hygienic services to the population.

VIII. Working Women

Article 48. Women may not be employed on jobs involving harmful or heavy conditions of labor, or on underground jobs, except for certain jobs (not physical in nature, and in the field of sanitary and household services) specified in a special list.

Article 49. Pregnant women, nursing mothers, and mothers with children under one year of age may not be given night work, required to work overtime, or sent on trips.

Mothers of children between one and eight years of age may not be assigned to overtime work or sent on trips without their agreement.

Article 50. Pregnant women, having doctor's orders to this effect, shall be transferred during their pregnancy to lighter jobs, with retention of their former average earnings.

Nursing mothers and mothers of infants under a year of age shall, if they cannot be kept on their former jobs, be shifted to other jobs with retention of their former average earnings during the nursing period or until the child becomes one year of age.

Article 51. Women are granted pregnancy and post-natal leaves of 56 days prior to childbirth and 56 days thereafter, during which time they receive government social insurance payments. If birth is abnormal or two or more children are born, the post-natal leave is 70 calendar days.

Upon completion of the pregnancy and post-natal leave, women shall, on request, be granted a further unpaid leave of up to six months.

Article 52. Nursing mothers and mothers having children under one year of age shall have, in addition to the general lunch and rest breaks, additional breaks for nursing. Each such break shall be for not less than 30 minutes, and not less often than every 3-1/2 hours.

Nursing breaks are counted as working time and are paid on the basis of average earnings.

Article 53. Refusal to engage women due to pregnancy or nursing is forbidden, as is payment of lower wages for these reasons.

Pregnant women, nursing mothers, and mothers of children less than a year of age may be dismissed only in exceptional circumstances, and then only if the factory or local committee of the trade union concurs.

IX. Minors

Article 54. In order to draw young people into work of value to society and to assure that their subsequent

education will have a relation to productive labor, persons who have attained their 15th birthday may be given employment.

Article 55. Persons under 18 years of age may not be employed underground or on jobs with harmful or heavy working conditions.

Article 56. Persons under 18 years of age may only be engaged after preliminary medical examination, and must undergo an annual medical examination thereafter until they are 18.

Article 57. The workday and vacations of workers and office personnel under 18 are determined by articles 15 and 23 of these Fundamentals.

Workers and office personnel under 18 years of age are paid a full day's wage for their shortened workday.

Workers and office personnel under 18 years of age may not be employed on night work or overtime work.

X. The Training and Upgrading of Workers and Office Personnel

Article 58. Wage and salary earners are trained and upgraded via trade-and-technical, individual, brigade and course training, and via specialized secondary and higher education on a full-time basis or while retaining jobs.

Trade-and-technical, and on-the-job training are free of charge, as are specialized secondary and higher education.

Article 59. A shorter work day or work week is provided for workers and office personnel who maintain passing grades in evening (or off-shift) general high school courses.

Wage and salary earners entering educational institutions, or combining study therein with jobs at enterprises or institutions, shall be given special vacations and other privileges.

Article 60. A fixed number of jobs and on-the-job training arrangements shall be reserved for persons under 18 at enterprises and institutions.

Enterprises and institutions shall provide paid jobs and salaried positions to be occupied by students of the various higher and secondary specialized educational institutions, shall provide on-the-job training for these students and the required housing and services.

XI. Labor Disputes

Article 61. Labor disputes are resolved:

(a) in committees on labor disputes set up at enterprises and institutions, and consisting of equal numbers of representatives of the factory, plant, or local committee of the trade union, and of representatives of management;

(b) in the factory, plant, or local committee of the trade unions;

(c) in the people's courts.

Article 62. The committees on labor disputes are the obligatory first step in handling labor disputes arising in enterprises and institutions between workers and office personnel on the one hand, and the management on the other, except for disputes on dismissals and other matters specified by law.

Decisions are arrived at in these committees by agreement of the parties.

Article 63. The factory, plant, and local committees of the trade unions shall deal with requests to solve labor disputes on which the parties were unable to agree in the committees on labor disputes, as well as workers' and office workers' complaints with respect to the decisions arrived at by these committees.

Article 64. The people's courts examine labor disputes:

(a) with respect to dismissals of workers and office personnel (except for top management positions specified in a special list);

(b) on other matters, if a worker or office worker does not accept the finding of the factory, plant, or local committee of the trade union or if the management of the enterprise or institution contends that the decision of the factory, plant, or local committee contradicts existing laws.

XII. Trade Unions

Article 65. Workers and office personnel have the right to unite into trade unions.

The trade unions represent the interests of the workers and office personnel before agencies of government and management in the fields of production, labor, living conditions and culture; involve workers and office personnel in participation in the management of industry, organize socialist competition and conduct production conferences; participate in deciding problems of work quotas and wages; cooperate in strengthening labor discipline; administer state social insurance; and conduct measures to meet the living standards and cultural demands of the working people.

The trade unions participate in elaborating laws on labor and on the material and service needs of workers and office personnel, exercise the powers of government in enforcing labor law and serve as agencies of public inspection in the field of safety and in providing the workers and office personnel with housing and services.

Article 66. The trade unions operate under their by-laws and are not subject to registration with government agencies.

Trade union bodies enjoy the rights of legal entities.

Article 67. The factory, plant, or local committee of a trade union:

(a) represents the workers and office personnel in all matters pertaining to their labor, living conditions, and cultural matters;

(b) takes part in drafting the production plans and capital investment plans of the enterprise or institution, and in drafting the plans for construction of housing and cultural and service-industry projects;

(c) hears reports by the management of the enterprise or institution on the carrying out of the production plan, obligations undertaken under the collective agreement, measures for organizing and improving working conditions, living standards and cultural and service needs of the workers and office personnel, and demands elimination of shortcomings discovered;

(d) advances proposals to superior management and government agencies for improving the operation of the enterprise or institution, and also on matters of conditions of labor, living standards and cultural and service requirements of the workers and office personnel;

(e) offers its views on candidates for top management posts in the enterprise or institution; poses before the appropriate agencies the matter of replacement or punishment of management personnel who fail to meet their obligations under the collective agreement, manifest bureaucracy, permit red tape and violate labor law;

(f) participates in the solution of problems of quota setting and the organization of wages;

(g) performs governmental functions with respect to social insurance for the workers and office personnel of the enterprise or institution, assigns the benefits under social insurance, participates through delegated representatives in setting the pensions to be received by workers and office

personnel, grants admittance for cures at sanatoriums and rest homes, and checks up on the organization of medical services for workers and office personnel and the members of their families.

Allocation of housing controlled by the enterprise or office is performed by the joint decision of the management and the factory, plant, and local committee of the trade union.

Article 68. The factory, plant, or local committees of the trade union exercises powers of inspection over the administration of labor legislation, safety engineering and industrial sanitation rules and standards; fulfillment of the collective agreement; execution by the management of the decisions of production conferences; prompt introduction of inventions, technical improvements and rationalization suggestions that have been adopted; fulfillment of plans of housing and cultural-and-service construction; operation of the available housing and community services; operation of stores and eating places.

Article 69. Workers and office personnel elected to trade union bodies without release from their jobs, and trade union organizers, stewards and volunteer labor inspectors, may not be dismissed or shifted to other work without the agreement of the appropriate trade union agency.

Article 70. Enterprises and institutions are required to make available without charge to the factory, plant, local and shop committees of trade unions the space they need, along with all equipment and facilities for functioning, and for holding meetings of workers and office personnel.

Enterprises and institutions shall also make available to trade unions, without charge, the buildings, rooms, and structures designated for cultural and educational, public health, physical culture and sports activities, and pay for the maintenance and operation of these buildings, rooms and structures.

Article 71. The executive committees of the local Soviets of working people's representatives must make available to trade union agencies, without charge, equipped buildings and halls for palaces of labor and union headquarters, as well as land and water areas for cultural and educational institutions and for physical culture and sports activities.

Article 72. State and economic agencies, and all persons in posts of responsibility, shall give every possible assistance to the trade unions in their activities.

XIII. State Social Insurance

Article 73. All wage and salary earners are entitled to obligatory state social insurance.

Article 74. Wage and salary earners (or, in the appropriate instances, the members of their families) are guaranteed the following, as state social insurance:

(a) benefits when temporarily incapacitated, when pregnant and in the post-natal period; benefits on the birth of a child, during retraining due to partial incapacitation; burial benefits.

(b) old age pensions, complete incapacity pensions, pensions on loss of the breadwinner, and long-service pensions (to specialists in certain categories).

State social insurance funds are also expended upon treatment of wage and salary earners in sanatoria, overnight sanatoria (or preventive treatment) services, and rest homes, upon therapeutic (dietetic) foods, maintenance of Young Pioneer camps and upon other measures for the

benefit of the wage and salary earners and the members of their families.

Article 75. Benefits for temporary incapacity are paid in cases of illness, injury, absence to care for a sick member of the family, quarantine and treatment in a sanatorium, and range up to full pay. Sickness or injury benefits are paid from the first day of loss of capacity to work, until this capacity has been recovered or it is determined that the individual has become an invalid.

Pregnancy and post-natal benefits are paid during the entire leave for this purpose, and range from two-thirds pay to full pay.

Article 76. Old-age pensions are granted to men after not less than 20 to 25 years of employment and upon reaching 50-60 years of age, and to women after not less than 15 to 20 years of employment and upon reaching 45-55 years of age, the difference depending upon the job conditions.

Pensions to invalids and upon loss of the breadwinner are paid regardless of the causes of these events, whether due to injury on the job, occupational diseases, general illness or injury unrelated to one's work.

If they so request, pensioners are admitted to homes for invalids, and the aged to complete maintenance at state expense.

Article 77. State social insurance funds are derived from the insurance contributions paid by enterprises and institutions without deductions from wages or salaries.

Failure of an enterprise or institution to pay insurance contributions does not deprive its wage or salary earners of the right to state social insurance benefits.

XIV. Supervision Over Observance of Labor Law

Article 78. Supervision over observance of labor law, the rules of safety engineering and industrial sanitation is effected:

(a) by state agencies, in accordance with the relevant statutes;

(b) by the trade unions and the technical and legal labor inspection services under their management.

Article 79. Persons in positions of authority who are guilty of violating labor law, the rules of safety engineering and industrial sanitation, failing to carry out their obligations under collective agreements or guilty of hindering the activities of the trade unions, are held responsible under the established legal procedures.

XV. Concluding Propositions

Article 80. The procedure for applying articles 12 and 26 (Part II), and 33, 75 and 76 (Parts I and II) of these Fundamentals shall be established by legislation of the USSR.

The procedure for applying articles 15 (except point "a"), 16 (Part II), 23, 24, 28, 29, 30, 36, and 37 (Part II), 38 (Part I), 40, 45, 46, 47, 48, 55, 59, 60, 61 and 62, as well as the procedure for applying the Fundamentals of Labor Law of the USSR and the Constituent Republics to wage and salary earners working under unusual conditions (seasonal, temporary, etc.) are established by legislation of the USSR, and within the limits determined thereby, by the legislation of the constituent republics.

Article 81. The Supreme Soviets of the constituent republics shall adopt codes of labor legislation in accordance with their constitutions and with these Fundamentals.

V. Zoloev:

USSR Foreign Trade Indicators

Soviet foreign trade statistics investigate the economic relationships between the Soviet Union and countries abroad. The statistical data testify to a substantial increase in Soviet foreign trade. The volume of trade between the USSR and foreign governments was almost seven times higher in 1958 than in the prewar year of 1938, in comparable prices. In connection with the rapid growth in its foreign commerce, the Soviet Union, which prior to World War II was 16th in the world in foreign trade, has now advanced to 6th place. Trade with socialist countries represents the bulk of the postwar commerce of the Soviet government. In 1958 these countries represented 74% of Soviet foreign trade.

Trade turnover — the gross value of the commodities exported plus those imported in the course of a given period of time (normally a year) — is characterized by the data on exports and imports for the USSR as a whole, and distributed by country and by commodity. The volume of exports and imports as a whole, and by countries, is defined in monetary terms, while the commodity breakdown is defined in kind and in money.

The present article examines the major content of the trade turnover of the USSR and provides a brief summary of the statistical methods employed to study it.

The foreign trade turnover of the USSR includes all commodities exported and imported on a commercial basis. The export and import of commodities on other than commercial principles is not included in trade turnover and is recorded separately. The export commodities going into foreign trade are broken down by source into commodities of Soviet and of foreign origin. The commodities of native origin include industrial and agricultural products supplied by Soviet industrial, trading, procurement and other enterprises. These include commodities of foreign origin imported into the USSR and processed here, on the condition that their value equals or exceeds the purchase price of these commodities. Exports of goods of foreign origin include finished products, raw and other materials and foodstuffs purchased abroad for shipment to third countries in order to meet the obligations of the Soviet Union. The totality of these commodities constitutes the re-export of the Soviet Union. Re-exports of foreign products occupy an insignificant place in Soviet exports. However, re-export operations do occur on a regular basis. These operations occur primarily in trade with the socialist countries and have to do with fulfillment of the obligations of the USSR under intergovernmental agreements. Goods of foreign origin are transferred to socialist states at their purchase prices plus an insignificant commission (not exceeding 1%) to cover the expenditures of the foreign trading organizations of the USSR.

Commodities of foreign origin imported into the USSR and re-exported without processing fall into the category of re-exports. Also in this category are commodities which are processed at Soviet enterprises, but whose value remains below their purchase price.

Also categorized as re-exports in Soviet foreign trade practice are commodities that have come into Soviet

ownership abroad and have been exported from one country to another without entering the Soviet Union. These include commodities of foreign origin purchased abroad by Soviet foreign trading organizations and shipped directly from the original seller to the ultimate purchasing country.

The realization of export commodities may occur either prior to or after shipment abroad. Therefore a distinction is made in exports and in foreign trade statistics between sales on contract, i.e., sales on which contracts with the purchasers have been concluded prior to export abroad, and exports of non-contract commodities, with respect to which contracts with purchasers have not been validated prior to the movement of export.

The vast majority of export goods are shipped abroad after contract sale. The export of commodities under other conditions represents a comparatively small portion of Soviet export trade. However, the division of export goods into contract-sold and non-contract-sold does have a definite practical significance. This breakdown facilitates a correct performance of export operations. When goods are exported in accordance with contracts, there is no separation between actual export and realization. This simplifies the job of the exporting organizations. They boil down essentially to writing the bill and accepting payment for the commodity. Another situation obtains when commodities not sold in advance are shipped. In this situation the major concern of the exporting organization is that of finding a customer and selling the goods.

Import goods are classified by destination into commodities for consumption in the Soviet economy, and commodities for re-export. The first group includes commodities purchased abroad on the orders of Soviet business organizations and delivered to these organizations after arrival within the country, whereas the second includes commodities designed for export to third countries. Commodities to be consumed in the national economy constitute the bulk of import commodities. They constitute the basis of Soviet imports and determine their volume and structure. Various independent sub-groups are set up within this group: commodities purchased to supply Soviet organizations abroad (the provisioning of the fisheries fleet, etc.), finished products and semi-manufactured items made of supplied raw materials and commodities purchased from goods admitted to the USSR temporarily for purposes of exhibition.

With respect to terms of payment, the commercial exports and imports of the USSR are broken down into various forms of deliveries. At present, shipments of goods under clearing agreements occupy the most important position in Soviet foreign trade. More than 80% of the foreign trade turnover of the USSR is based on such agreements. The fundamental and decisive form in economic relationships with the lands of people's democracy is trade based on bilateral agreements for mutual shipments of commodities. Trade with capitalist countries also includes, as an important component, shipments in accordance with bilateral agreements.

Soviet shipments of commodities in accordance with

credit agreements and the deliveries of commodities to make good the credits extended to recipient countries play a significant role in the foreign trade of the USSR. Such shipments play a particularly important role in trade with the lands of people's democracy. The Soviet Union extends loans and credits to the lands of people's democracy on highly favorable terms for the purchase, in the USSR, of equipment and machinery, as well as for the purchase of commodities that are not produced in these countries or are produced on a scale inadequate to satisfy the needs of their economies. The USSR also extends credits and loans to capitalist countries. Countries that receive loans from the USSR repay them as well as the interest thereon in goods constituting part of the normal exports of each such country.

One of the forms of credit extension to the lands of people's democracy is the granting of commodity loans to them by the USSR. These loans are usually made for brief periods and are intended to satisfy various urgent needs for particular types of raw materials. A special feature of this type of credit is the fact that the loans and interest thereon are usually made good in the same commodities that were advanced as loans. In rare cases, the loans are repaid in other commodities.

Soviet foreign trade also includes shipments of commodities under barter and balance arrangements. However, this type of shipment has not become at all general.

A certain portion of the commodity exchange with the lands of people's democracy is based on payments calculated in the local (nonconvertible) currency. Trade in nonconvertible currency is also conducted with capitalist countries, particularly in cases where there is no trade treaty. Trade in freely-convertible currencies plays an important role in commodity turnover with capitalist countries.

The Soviet Union exports and imports considerable quantities of goods which do not enter into foreign commerce. They include: exports of commodities under agreements for free grants to foreign states; commodity exports in the form of Soviet contributions to the UN Technical Aid Fund; free assistance to the peoples of foreign states who have suffered natural calamities; temporary exports of Soviet goods to exhibitions and fairs, and the re-import of the portion not sold abroad; temporary imports of foreign goods into the USSR for exhibitions, and the re-export of the portion not sold here; the export and import of commodities employed as sample goods; temporary export and import of animals participating in steeplechases, flat races, etc.; temporary export and import of returnable crating, containers and transport equipment; the shipment of transportation equipment abroad for repair and its return after repair; the rental export of Soviet motion picture films and their return to the USSR; importation of foreign films for rental, followed by re-export; supplies of provisions, materials and other commodities for vessels and aircraft traveling abroad; consumer packages; the personal baggage of passengers; direct transit of foreign commodities through the territory of the Soviet Union; re-import in the form of importation of Soviet goods previously shipped abroad for sale through commercial channels.

Soviet foreign trade statistics are based on the data of the day-to-day accounting of Soviet economic organizations engaged in export and import operations. These data are employed as the source material for statistical elaborations and preparation of statistical publications on the foreign trade of the USSR. (1)

The foreign trade operations reflected in commercial documents are recorded and generalized in the course of keeping current accounts. The following sources are employed for these records: the data of export and import

deals of foreign trade organizations on forward sale of export commodities and the purchase of import commodities; orders and warrants issued by the all-Union export-import combinations to Soviet industrial, commercial, procurement and other enterprises for delivery of commodities for export; import orders of Soviet purchasers with respect to the importation of goods of foreign origin; transport documents (waybills and manifests); exports and import permits; notices of opening of lines of credit, and other documents.

The receipt of precise data on foreign trade turnover is accomplished by evaluation of the commodities exported and imported. Export commodities are evaluated in prices F.O.B. (2) Soviet ports or free at the land boundary of the USSR, and import commodities on the basis of prices F.O.B. foreign ports or free at the land boundaries of the country of shipment. Each lot of exported and imported goods is evaluated. The current accounts of foreign trade make for realism and uniformity in the appraisal of commodities. The realism of the appraisal is achieved by employing the prices established in contracts of purchase-and-sale, i.e., prices agreed upon between the sellers and purchasers of the commodities. Uniformity of the appraisals is achieved by employing a uniform procedure for evaluation of the objects of accounting in all foreign trade organizations.

An important prerequisite for proper appraisal of exports and imports is the receipt of reliable data on the quantity of commodities entering into foreign trade turnover. The quantity of commodities circulating in foreign trade is determined on the basis of documents and is reflected in the books in specific units of measurement. Commodities whose quantity is measured in units of weight are recorded in net weight, i.e., in the weight of the commodity alone, without packaging. The net weight of commodities is determined from the specifications in bills, weight records and other documents.

Appraisals of export and import commodities are based on payment prices. In current books, payment prices are understood as the prices which the purchaser actually pays for a commodity to the seller in the course of fulfilling a contract. In foreign trade, the actual price of a commodity may differ from that stated in the contract. This is because the real price emerges as the result of the performance by the seller of all his obligations under the contract. The contract normally specifies the average quality or base grade of the commodity. The conditions of the contract provide that the quality of the commodity delivered may differ within stated limits from the base grade. The price of the commodity, conditioned on the base grade, changes if the quality of the delivered commodity differs from the base grade.

The current books record the prices of all commodities exported from and imported into the USSR. The prices are reflected in the books in the form in which they are entered into the contracts, and after recalculation on a uniform basis: F.O.B. port or free at the border of the country of origin. This makes it possible to obtain data with respect to the individual prices paid for various lots of commodities sold or purchased on forward contracts, on the average prices for commodities, on the price levels for export and import wares and the relations between them, on the movement of prices for any given time period under study, on prices in Soviet export and import trade as compared to world prices.

Conversion of prices to a uniform basis is of great significance in practical work and in studying foreign trade. Payment prices are not always satisfactory for purposes of proper appraisal of commodities. They are determined on

various bases (for example, F.O.B., C.I.F. (3)), and consequently some include the value of the commodity and expenditures up to delivery aboard ship in the port of origin, whereas others also include expenditures in delivering the commodity to its point of destination, etc. As a result, payment prices for various commodities or even for different lots of the same commodity purchased or sold at about the same time, but under different conditions of delivery, may differ substantially and become incapable of comparison.

In the practice of current accounting of USSR foreign trade, appraisals of commodities are made: (a) in prices F.O.B. the port in the country of origin — when shipping is by water; (b) in prices free aboard the freight car or truck at the border of the country of origin — when shipment is by land; (c) at prices free aboard aircraft at the last field in the seller's country, in air freight. This procedure in appraising commodities offers substantial advantages from the practical viewpoint. It makes possible the avoidance of recalculation of the overwhelming majority of prices, inasmuch as trade between the USSR and the people's democratic countries is conducted under conditions of F.O.B. the port or free at the border of the selling country. Prices in trade with capitalist countries are determined in different ways. Yet, even in trade with these countries, the prices of many commodities are established F.O.B. or free at the border of the shipper's country. Consequently, it becomes necessary to recalculate prices only with respect to commodities constituting a comparatively small share of the foreign trade of the USSR.

In some cases, commodities are exported or imported prior to the completion of agreements covering these deals, so that their prices are not known at the time they cross the Soviet frontier. This type of situation occurs in advance deliveries in trade with socialist countries, in the export of commodities for warehousing or for display. Moreover, certain commodities are exported and imported under contracts in which the monetary expression of their value is lacking. Contracts of this type include barter agreements, contracts based on agreements for commodity loans, and deals for delivery of raw materials for processing on customer's conditions.

Prices of commodities shipped in advance become known after conclusion of the contract, whereas those of commodities shipped for warehousing abroad become known after they have been sold. Both occur after the export and import of the commodities, whereas valuation is performed when they cross the frontier. In current bookkeeping these commodities are carried at the prices paid in previous transactions or at market prices, whereas if forward-contract sales and purchases are involved, at the prices of transactions for other lots of the same commodity. This valuation is preliminary, and is carried on the current books until the contracts have been concluded. After the contracts are signed, the preliminary valuation is changed and the necessary corrections are made in the books.

Other methods of valuation must be employed when goods are exported and imported under barter arrangements or transactions made under commodity loan agreements or deliveries for processing on customer's conditions. Valuation of commodities involved in barter arrangements, envisaging the exchange of certain commodities of given value for others of equal value, is based on the prices agreed upon between the parties when the contracts are signed. The value of commodities in commodity exchange deals in which the two parties exchange a given quantity of certain commodities for a quantity of other commodities stated in the contract is determined by world prices prevailing as of the date of the contract or a date close to that of the contract.

No prices are indicated in contracts covering commodity loans. Likewise, prices are often omitted in contracts for the delivery of raw materials to foreign governments for processing on the customer's conditions and for return shipment of the finished products made from this raw material. These contracts reflect only the quantity of products to be delivered, measured in kind. In current bookkeeping, commodities shipped under such deals are regarded as ordinary exports and imports. Valuation of commodities shipped under agreements involving the granting of commodity loans or deliveries of customer's raw materials is made on the basis of prices in deals concluded under trade agreements, and when none exist, on the basis of world prices as of the date the agreement is signed.

Valuation of commodities also involves the conversion into rubles of prices stated in foreign currencies. This conversion is made on the basis of the official rates of exchange published by the USSR State Bank.

In the current books, exports and imports are recorded as of the time the commodities cross the Soviet frontier. Certain distinctions are made between exports and imports in solving practical problems having to do with recording the crossing of the frontier.

In shipments by land, the time that commodities are brought to and permitted to cross the USSR frontier coincides with the time when responsibility for the freight is transferred from the transport organization of one government to the transport organization of the other. For purposes of bookkeeping, the document testifying to this transfer of responsibility for the freight is employed. In shipment by land, a freight in foreign trade may cross the frontier only once.

Freight crossing sea frontiers is received in ports. In the case of imports this means that the freight is received after it has crossed the state frontier, inasmuch as no special record is made when vessels of the merchant marine cross the sea frontier. In shipments by water, export and import freight may cross the frontier twice or more. This situation will occur when a vessel makes stops in two or more Soviet ports to load or unload freight. In this situation the export commodities loaded in the first port, and the import commodities to be unloaded in the last port of call, actually cross the frontier as many times as the vessel calls at ports. Under these conditions it is necessary to set other rules for recording imports and exports than those which apply at land frontiers. In the practice of current accounting of foreign trade, the import of commodities by water shipments is reflected as of the moment that the ship arrives in the first Soviet port. All the freight aboard the ship is calculated as imports as of the moment that notice of arrival in the first Soviet port is received. Exports are recorded on the basis of the bills of lading issued upon completion of loading operations in each individual port.

In air transport, no record of the time when freight crosses the frontier is kept. Information to the effect that freight has been shipped abroad or has arrived in the USSR comes from airports within the country at which the aircraft departs or lands. Therefore, the export and import records are a little ahead of, or behind, the time when the freight crosses the border.

Thus, export commodities are included in commodity turnover upon entry onto foreign lines where railway transport is concerned; upon transfer to the foreign purchaser at border transfer points of the Soviet Union in the case of truck delivery; upon departure from Soviet ports in the case of shipment by sea; and upon departure for an international flight, in the case of air transport. In the current

accounts of exports, the date that commodities cross the frontier of the USSR is deemed to be: the date of the stamp of the border station of the purchasing or transit country upon the railway waybill in transport by rail; the date of the transfer document at the Soviet border post, in the case of truck transport; the date of the bill of lading in the case of shipment by sea; the date of the inland waterways waybill or the stamp of the purchasing or transit country's customs office upon that waybill in the case of river transport; and the date of the freight manifest issued by the airfield from which the aircraft departs, in the case of air transport. In view of the specific features of trade in ocean and river vessels, the latter are entered in the records of export volume as of the date of the document of transfer of ownership of each vessel, signed by the representatives of the purchaser and seller. Certain commodities are shipped to foreign buyers by mail. Such commodities are included in the volume of exports as of the date of the postal receipt issued by the post office accepting the parcel.

This method of keeping export books is employed with respect to commodities of Soviet origin and foreign commodities imported into the USSR, and then re-exported after processing (or without processing). All these commodities cross the frontiers of the Soviet Union. However, commodities that become Soviet property abroad, and are shipped from one country to another without import into the USSR, also enter into trade turnover. These commodities are listed as exports as of the moment they are shipped from the enterprises or from the ports of the selling country. In this case the date of export is counted as the date of the document accompanying the commodity, copied by the transport organization accepting the commodity for freight shipment.

In current bookkeeping the time of import is recorded as follows: as of the time of crossing the USSR frontier, where land shipments are concerned; as of the moment of arrival of a ship carrying the imported freight at the first Soviet port of call, in maritime transport; as of the time of arrival of an aircraft upon Soviet territory, in air freight; and as of the moment a parcel arrives at the recipient's post office, in shipment by parcel post. Ships and other self-propelled vessels appear in the import books as of the time they actually become the property of the Soviet Union. The date of import is considered to be: the date of the stamp of the Soviet border railway station on the railroad waybill, in this form of transportation; the date of the document transferring ownership of an imported commodity, drafted at the border receiving point of the USSR, where truck haulage is concerned; the date of actual arrival of a ship in the first Soviet port where unloading occurs, as shown in a message to the port administration, in the case of maritime and river transport; the date of arrival of an aircraft at the Soviet airport noted on the freight receipt by the administration of the airport of arrival, where air transport is concerned; the date of the stamp on a postal notification made out by the post office releasing the parcel, in the case of parcel post; and the date on which the Soviet flag is raised, in the case of deliveries of ships and other self-propelled water-borne equipment.

Commodities purchased abroad and shipped from one country to another without being imported into the USSR are listed as imports as of the moment of shipment from the enterprises or the ports of the selling country. These commodities are recorded as of the date of the covering document. Commodities acquired abroad and granted to Soviet institutions for utilization abroad are considered as having been imported as of the moment they are accepted by these organizations, and are recorded as of the date of the act of transfer of ownership.

In current accounts, the geographic distribution of the foreign trade of the USSR is reckoned on the basis of the countries of destination of export commodities, i.e., in terms of the countries consuming them, and the countries of origin of imported commodities.

Current accounting is considerably facilitated if the information on the countries of destination of the export commodities and the countries of origin of import commodities is stated in the covering documents. This condition is adhered to for the majority of commodities, inasmuch as the land of original address of the export commodity usually coincides with the country of destination, whereas the land from which an import commodity is shipped coincides with the country of origin. However, in the case of certain commodities the situation is different. Where these commodities are concerned it is necessary to resort to other sources of information. Available sources are contracts, notifications by purchasers and sellers, trademarks, etc. In those few cases in which these sources still do not make it possible to gather the required information on the commodity, the country of destination of the export commodity is taken to be that of the original addressee, and the country of origin of an import commodity is taken to be that from which it was shipped.

All foreign trade operations are reflected on the books of the system of current accounting. These books show the various foreign trade operations, along with groupings of these operations in terms of economic homogeneity. The elaboration of the data obtained by keeping these books is carried out by means of current reporting. The data of current reporting are employed as the source material for statistical elaborations on foreign trade. In the process of elaboration and summation of the data of current accounts, the commodities circulating in foreign trade are grouped under a variety of headings. For purposes of studying foreign trade and for economic guidance, the greatest importance is attached to groupings by the countries with which export and import business is done, by the economic purpose of the commodities and by their departmental categories. Grouping of commodities by branches of the national economy, by the degree of processing of commodities, and by forms of payment, also plays a serious role.

The data resulting from geographical classification make it possible to determine the volume of Soviet trade in each of the two world markets — the democratic and the capitalist — to determine the relationship between them and to determine their share in Soviet foreign trade. These data also indicate the volume of trade with each individual country.

Soviet export and import commodities are grouped as follows: (a) by their economic purpose — into means of production and consumer goods; (b) by the branches of the national economy — into industrial goods and the products of agriculture; and (c) by the degree of processing — into finished products and raw materials. There are also subgroups within these groups. Grouping is also reckoned under the categories and groups of the Unified Commodity Nomenclature for Foreign Trade. The object of these groupings is to determine the commodity composition and the structural shifts in foreign trade.

Grouping by organizations carrying out export and import operations is designed to demonstrate the volume of work performed by these organizations, determine the degree to which they carry out approved plans, and to reveal the share and significance of each in the foreign trade of the USSR.

Planned and final balances are in wide use in foreign trade. The compilation of planned balances is an inseparable portion of planning work. These balances serve the purpose of validating the export and import plan of the

USSR as a whole, the individual subdivisions and the most important commodities included in the plan. The final balances are compiled on the basis of the data of current reporting, with the object of verifying the fulfillment of the planned balances and clarifying the manner in which the actual relationship between exports and imports has worked out.

Trade and material balances are of considerable importance in the economic guidance of foreign trade. The trade balance characterizes the relationship between the values of exports and imports during a given period of time (normally a year). It is worked out for each country with which regular trade is conducted, for groups of countries, and for the world as a whole. The trade balance makes it possible to study the relationship between USSR exports and imports as a whole, and for the most important groups of commodities, and consequently to clarify the role of foreign trade in changing the material resources available to the socialist state. Study of the foreign trade of the USSR in the two world markets — the democratic and the capitalist — has acquired enormous importance.

Study of the foreign trade turnover by forms of payment is very important today. Prior to the world economic crisis of 1929-1933, when the currencies of the capitalist countries were convertible, international payments were made on a multilateral basis in relatively stable currencies. At that time, the study of foreign trade by types of payment was not a matter of any great complexity. Therefore, in the trade balance turnover was not then broken down into types of deliveries. Subsequent to the crisis of 1929-1933 the situation underwent a fundamental change. The currencies of the majority of capitalist countries lost their stability. The consequences of the crisis in international trade were also manifested in the fact that profound changes occurred in the forms and methods by which foreign trade was conducted. In the economic relationships between governments, shipments of commodities on the basis of special payments agreements, with settlement by clearing, became widespread. Trade based on inconvertible currencies

appeared. Trade based on a balancing of shipments and on barter deals became more widespread. All this had its effects upon the trade balance. Analysis of commodity turnover by forms of payment came to occupy an important place in this balance.

In the material balances which are so widely employed in foreign trade operations, the quantities of imports and exports of the most important commodities circulating in foreign trade are reflected. The chief object of these balances is to reveal the commodities in which the Soviet Union is a net exporter or importer⁽⁴⁾, and to determine the countries with which it deals in the given commodities. Material balances are compiled in kind with respect to exports, imports, and surpluses in either direction. In each balance, data with regard to these indicators are presented in toto and are also distributed according to the customer and supplier countries.

Footnotes

(1) Before the war, statistical publications in the field of foreign trade were based on customs data. Comparisons with the data of these publications should take into consideration the fact that imports were evaluated in prices C.I.F. Soviet ports or free at the USSR land frontier.

(2) F.O.B. is the initials of the three English words "free on board." F.O.B. prices include the value of the commodity, transport and other costs up to the time of delivery aboard a ship.

(3) C.I.F. is the initials of the English words "cost, insurance, freight." C.I.F. prices include the cost of the commodity, admiralty insurance and all transport costs to the port of destination.

(4) A net exporter of a commodity is a country whose exports thereof exceeds its imports of it, and a net importer is a country whose imports of the given item exceed its exports of it.

A. Kats:

On the Question of the So-Called Income "Revolution" in the USA

At the beginning of the fifties the well-known US bourgeois economist, S. Kuznets, published a book, in which he sought to prove with the help of statistics that the share of the upper income groups of the US population (5% of the population) in the total sum of private incomes allegedly decreased from 34.1% in 1928 to 17.7% in 1946. The share of the top income group (1% of the population) dropped, according to S. Kuznets, from 19.1% to 7.7%. (1)

These calculations were utilized by the US monopolies for propaganda of a mythical "revolution" in incomes. A. Burns, former economic adviser to the US President, referring to S. Kuznets's figures, declared that a "turning point has been reached in the distribution of the national income of the USA during the past twenty years, and although this has been accomplished peacefully and gradually it is the greatest social revolution in history." (2)

It is doubtful whether the apologist fabrications of bourgeois economists were ever based on such flagrant abuse of statistical data as in this case. In order to establish whether the gap between rich and poor in the USA widened or narrowed during recent decades, in the first place it is necessary to analyze the statistical data which throw light on the distribution of the national income among the chief classes in capitalist society; secondly, the true significance of the less reliable and less complete data on the distribution of the mass of private incomes among the different groups of the population, which S. Kuznets prefers to use, must be determined.

In analyzing the official figures of the national income of the USA from the aspect of its distribution among classes, the following must be borne in mind:

First of all, the salaries of high executives of corporations are included in the total sum of the wages of workers and employees. These salaries, however, constitute part of the profits of capitalists and, naturally, have nothing to do with the incomes of workers and employees. In this way bourgeois statistics patently lower the share of capitalists in the national income and exaggerate the share of the proletariat.

Second, in the same sum, the allowances (in cash or in kind) of the personnel of the armed forces and the salaries of government officials are included. Thus, these sums, which are a burdensome deduction from the incomes of the working population and which are exacted in the form of exorbitant taxes, are added by bourgeois statistics to the incomes of workers and employees as an additional item. When the state apparatus swells, the army increases, etc., a still larger share than before is deducted from wages and salaries in the form of taxes. However, as presented by American statistics this means an increase in the incomes of workers and employees. Moreover, this is a double falsification, because bourgeois statisticians do not deduct the tremendously inflated direct and indirect taxes from the nominal wages of workers and employees.

Third, the total sum of the incomes of workers and

employees also includes a certain part of the capitalists' service expenditures (wages of domestic servants, the attendants of clubs, places of amusement, churches, so-called "charitable" societies, etc.). In reality, these sums are a part of the consumed surplus value, and are quite illegitimately added by US statistics to the total sum of incomes of workers and employees when calculating the distribution of the national income among classes.

Fourth, in the column headed "compensation of employees" bourgeois statisticians include, in addition to wages and salaries, the whole of the "supplements to wages and salaries." The latter legitimately include grants issued in cases of accidents, pensions, and the sums paid by large enterprises under collective agreements. But, quite arbitrarily, also included here are the contributions made by the capitalists to the so-called state insurance funds for illness, unemployment, old age, etc., as well as a number of heterogeneous sums having no relation to the incomes of workers and employees (allowances to military reservists, directors' bonuses, per diem payments to jurors and witnesses, payments to prisoners, government payments to enemy prisoners of war, payments to magistrates for registration of marriages, etc.). The inclusion of the capitalists' contributions to the social insurance funds as "supplements to wages and salaries" is particularly preposterous if we take into account the fact that at the same time the US statistics do not exclude from the wages of workers and employees the social insurance taxes (contributions) which the latter pay. In the course of thirty years — from 1929 to 1957 — two-thirds (66.3%) of the total sum of the insurance paid to factory and office workers for sickness, old age, unemployment, etc., represented the sum of the contributions deducted from their earnings. Hence, it follows that in the overwhelming majority of cases only the sums deducted from the wages of workers and employees for the so-called social insurance fund are returned to them, while the capitalists bear quite insignificant expenditures for the insurance of workers and employees. 65% of the contributions made by the capitalists and government institutions to the so-called social insurance fund during 1929-1957 were utilized by the bourgeois state exclusively for the benefit of the capitalist class itself, not for the payment of any allowances or grants, but chiefly to finance the state debt, in other words, to finance the orders placed with the big military monopolies. On the other hand, the contributions made by the capitalists to the social insurance fund are practically all shifted by the big monopolies onto the shoulders of the consumers, i.e., the shoulders of workers and employees in the form of high prices.

Fifth, bourgeois statisticians do not deduct from the total sum of wages and salaries of workers and employees the huge direct and indirect taxes, which have risen particularly since the forties.

The scarcity of primary statistical data for the period 1900-1929 makes it impossible to establish conclusively the

above-mentioned distortions of bourgeois statistics concerning the national income of the United States and its distribution, and only minimal corrections of these computations can be made. With regard to the period 1929-1957, more detailed statistics are available which allow us to make a number of important corrections in the calculations of the national income and its distribution among classes, and thus to reveal more fully the picture of the relative impoverishment of the working class. In view of the above, a statistical analysis has to be made for two periods: 1900-1929 and 1929-1957.

I. Distribution of the National Income During the Period 1900-1929

Even the minimal amendments to the calculations of the national income for the period of 1900-1929, as compiled by bourgeois economists, make it impossible for these calculations to conceal the decrease in the share of workers and employees in the national income. The only correction made by us in the bourgeois economists' calculations is to deduct the salaries of high executives of corporations, which form a part of profits, and also the so-called "supplements" of workers and employees (pensions, etc.) from the total sum of compensation of workers and employees, as the taxes paid by them have not been deducted from their wages.

Table I

"Apparent" Share of Workers and Employees in the National Income During 1900-1929
(absolute figures in million dollars)*

Years	"Compensation of employees" (calculated by bourgeois economists)	Imaginary "labor incomes" (pensions, etc.)	Salaries of high corporation executives	Wages and salaries of workers and employees**	National income	"Apparent" share of workers and employees in national income (in percent)***
1	2	3	4	5	6	7
1900	9,650	150****	216*****	9,284	19,100	48.6
1910	16,266	254	540*****	15,472	32,580	47.5
1920	42,283	1,016	2,437	38,830	75,397	51.5
1929	53,350	1,100	3,337	48,913	91,988	53.2

* All data not especially stipulated were calculated by a group of economists of the Brookings Institution (see M. Leven, H. Moulton and C. Warburton, America's Capacity to Consume, The Brookings Institution, 1934, pp. 152-153, 155) on the basis of calculations made by King (W. King, The Wealth and Income of the People of the United States, New York, 1923; The National Income and Its Purchasing Power, New York, 1930).

** Column 2 minus columns 3 and 4.

*** Column 5 in relation to column 6.

**** Extrapolation

***** The estimate for 1910 is based on data of the census of 1909 (see A Graphic Analysis of the Census of Manufacturers, 1849 to 1919, p. 85). It is assumed that the share of the salaries of high executives of corporations of the manufacturing industry in the sum total of such salaries was approximately the same as in 1919. For 1900 — extrapolation.

The data on total wages and salaries and on the national income cited in Table I are greatly exaggerated, because they are not based on uniform prices but reflect the sharp rise in prices which was particularly marked during the period of inflation. The growth of the national income during the first thirty years of the twentieth century, taking into account the rise in prices and the increase in the size of the population, barely amounted to 1.3% per annum, which, with due regard for the tremendous increase in what are purely distribution costs and expenditures on non-material services, is proof of the slow rate of growth of the real national income (without double counting).

The "apparent" share of workers and employees in the national income of the United States increased from 48.6% in 1900 to 53.2% in 1929. In reality, however, this increase conceals an obvious drop in the share of workers and employees in the distribution of the newly created social product. This is because during the thirty years under review there took place an extremely intensive process of proletarianization, the transformation of a part of the petty producers, petty and small owners (farmers, artisans,

tradesmen, etc.) into hired slaves of capital. Because of this, the share of all workers and employees, that is, of hired labor, in the national income of a capitalist country increases only outwardly, as seen in historical perspective (3)

Owing to the interweaving of these two processes — the deepening of the gap between the material conditions of the workers and the wealth of the capitalists, and the conversion of new sections of the population into hired slaves of capital — the further impoverishment of the proletariat may be deceptively concealed behind a small increase in the "apparent" share of workers and employees in the national income. Such a rise in the "apparent" share of workers and employees in the national income represents a flagrant contradiction between the form of the phenomenon and its content. It does not furnish proof of any relative improvement in the situation of workers and employees, but conceals the fact that the poverty of the proletariat not only increases, but also embraces ever fresh sections of the population, in other words, becomes more widespread.

Such precisely is the real meaning of the above-

mentioned increase in the "apparent" share of the workers and employees in the national income of the United States during the first third of this century. For it was during that period of time that the further expropriation and proletarianization of the working masses was expressed in the growth of the proportion of hired workers in the total

number of the gainfully employed population from 69.2% in 1900 to 79.7% in 1930. If we take this into account, then the more realistic picture of the drop of the workers' share in the national income of the United States will be approximately as follows:

Table II

Drop in Workers' and Employees' Share in the National Income during 1900-1929

Years	Share of hired workers (in %)	How the share of workers' and employees' wages in the national income should have changed in accord with the increase in their numbers**	"Apparent" share of workers and employees in the national income (in %)**	Index of drop of workers' and employees' share in national income ****	Share of original number of workers and employees (69.2% of gainfully-employed population) in national income (in %)*
1	2	3	4	5	6
1900	69.2	48.6	48.6	100.0	48.6
1910	73.7	51.7	47.5	91.9	44.7
1920	76.5	53.7	51.5	95.9	46.6
1929	79.7*****	56.0	53.2	95.5	46.2

* According to S. Bell, Productivity, Wages and National Income, p. 10. These data include high officials of corporations, whose number, however, is insignificant (in 1929 — less than 1% of the gainfully-employed population).

** The initial (48.6%) multiplied by figures in column 2, recalculated in index form (1900=100), and divided by 100.

*** See column 7 of previous table.

**** Column 4 in relation to column 3.

***** Initial figure (48.6%), multiplied by the index of column 5 and divided by 100.

***** Beginning of 1930.

This table is instructive in many respects. It shows the rapid growth of the proportion of hired workers in the total mass of the gainfully-employed population, which is the result of the proletarianization of the so-called middle classes — farmers, artisans, petty owners, etc. — expropriated by big capital, and characterizes the spread of poverty. Column 3 of the table shows that the increased size of the population working for hire should have disposed of 56% of the national income in 1929, its relative status remaining unchanged. However, even the data provided by American bourgeois economists show that in reality the share of workers and employees in the national income amounted to only 53.2%, and not 56%. In other words, the increase in the "apparent" share of the wages of workers and employees in the national income during the period under review by no means covers the simultaneous increase that took place in the proportion of the population working for hire.

The process of relative impoverishment extends not only to the workers and employees, but also to other sections of the working population subjected to proletarianization. Let us attempt with the help of additional statistics to trace the fall of the share of workers and employees and the proletarianized part of the working population in the national income of the USA during the period 1900-1929. King's calculations (4) concerning the distribution of incomes among families (including single persons) in 1910 show that 69.2% of the families with the lowest incomes received 42.3% of the national income, 73.7% of the families — 46.5% and 79.7% of the families — 52.5% of the national income.

These figures are close to those of the preceding table, although they are based on different primary statistical material. It follows from Table II that in 1910 the American workers and employees, forming 73.7% of the gainfully-employed population, received 47.5% of the national income. According to King, 73.7% of all families and single persons disposed of 46.5% of the national income. Hence, we may assume without fear of error that 73.7% of the families and single persons who in 1910 received 46.5% of all incomes were chiefly workers and employees.

From the above data on the distribution of the national income among families it follows that in 1910 10.5% of families and single persons (79.7-69.2) disposed of 10.2% of the national income (52.5-42.3). Precisely this group (10.5% of the families), for which data for 1910 are available, may be considered that part of the population which was subjected to proletarianization between 1900 and 1929. During that period it was wholly proletarianized, increasing the proportion of workers and employees in the mass of the gainfully-employed population to 79.7% (see Table II). Since it was partly proletarianized during the period 1900-1910 (the proportion of workers and employees in the gainfully-employed population increased from 69.2% to 73.7% during those ten years), it is to be assumed that in 1900 the share of this group in the national income was slightly larger than in 1910 (at least 10.4%). In that case, the joint share of the 79.7% of the gainfully-employed population (69% workers and employees, and 10.5% the proletarianized part of the population) in the national income in 1900 amounted to 59% (48.6 plus 10.4). In 1929, as the above calculation

of the national income shows, this share equalled only 53.2%. By making the necessary intervening calculations, the following

table showing the share of workers in U.S. income is obtained.

Table III

Decline in the Share of the Working People in the National Income During 1900-1929

Years	Share of workers and employees (%)		Share of workers and employees and proletarianized part of the population	
	In the gainfully-employed population	In the national income	In the gainfully-employed population	In the national income
1	2	3	4	5
1900	69.2	48.6	79.7	59.0
1910	73.7	47.5	79.7	53.5
1920	76.5	51.5	79.7	54.6
1929	79.7	53.2	79.7	53.2

Even these rough figures obtained as a result of a critical revision of bourgeois economists' calculations present a very clear picture of the intensified relative impoverishment of the workers and employees and the proletarianized part of the population of the USA during the first thirty years of the twentieth century. In reality, the decline in the share of the working people in the national income of the United States is considerably greater. This is because in the above calculations the salaries of government officials, representing in part a direct deduction from the wages of workers and employees, were not deducted from the sum of workers' and employees' wages. Moreover, during the first two decades of the century the state apparatus in the USA began to be militarized and to swell rapidly.

(2) Distribution of the National Income During the Period 1929-1957

In determining the sum of the national income and the workers' and employees' share in it for the period 1929-1957, we have not included the services and remuneration of those non-productive hired workers who themselves are direct, although extremely poorly paid, "living objects of consumption" of the capitalists when spending consumed surplus value (servants, workers and employees of non-commercial organizations, government employees), in contrast to those workers in the sphere of services who are hired by the capitalists for the purpose of appropriating a part of the surplus value, profits.

The sum of the national income obtained on the basis of this criterion, and the sum total of the wages of workers and employees, contain a certain amount of double counting, but nevertheless these indices make it possible to determine the share in the national income of all hired workers directly exploited by the capitalists for the creation and appropriation of surplus value.

It is methodologically correct to calculate the national income without indirect taxes, and to include in it the combined wages of workers and employees with deduction of both direct and indirect taxes. It should be noted that while publishing data on the "national income" excluding indirect taxes, the official statistics

of the United States include in it the wages of workers and employees with indirect taxes included, and therefore sharply overstate the share of workers and employees in the national income.

Here is a calculation of the direct and indirect taxes (federal, state and local) as applied to the data on the combined wages of workers and employees (see Table IV on the following page).

Direct and indirect taxation of workers and employees increased from 9% in 1929 to 14.9% in 1940, 25.5% in 1953, 24.8% in 1955, and 26.4% in 1957, that is, threefold. Not included here are the social insurance payments deducted from wages, insofar as we have deducted the sum of these taxes directly from the total sum of wages.

A preliminary estimate of the distribution of the national income during 1929-1957 is given in Table V on the following page.

Column 2 of Table V presents data on the sum of wages and "supplements" of workers and employees for thirty years as calculated by American government statistics. These data are clearly falsified as, together with the nominal wages of workers and employees, they include the salaries of high executives of corporations, the salaries of government officials, payments of persons in the private employ of capitalists, allowances of the personnel of the armed forces, etc.

Column 5 presents corrected data on the wages of workers and employees (employed in enterprises of all branches of the economy, including state enterprises), which were obtained by deducting from the data of column 2 the salaries of high executives of corporations, the salaries of government officials, allowances of the personnel of the armed forces, wages of domestic servants and hired workers of various non-commercial organizations of the bourgeoisie. From the figures thus obtained, direct taxes (federal, state and local) were deducted; to this were added the allowances under all forms of social insurance (the social insurance tax on the wages of workers and employees being deducted), allowances for injuries, pensions and other sums paid under the collective agreements and then, finally, the indirect taxes were deducted.

Column 3 — "national income" — presents the official data (with "statistical discrepancies" taken into account) of

Table IV

Direct and Indirect Taxes Levied on the Combined Wages of Workers
and Employees During the Period 1929-1957
(in percent of wages)*

Years	Taxes			Years	Taxes		
	Direct	Indirect	Total		Direct	Indirect	Total
1929	0.1	8.9	9.0	1948	9.1	11.4	20.5
1932	0.4	13.7	14.1	1949	8.5	11.9	20.4
1937	0.6	13.6	14.2	1950	8.2	12.2	20.4
1939	0.8	13.9	14.7	1951	10.5	12.2	22.7
1940	1.0	13.9	14.9	1952	11.9	12.8	24.7
1943	9.6	12.7	22.3	1953	12.5	13.0	25.5
1944	9.1	12.9	22.0	1954	12.0	12.7	24.7
1945	9.7	12.8	22.5	1955	12.0	12.8	24.8
1946	8.9	11.8	20.7	1956	12.8	13.2	26.0
1947	9.5	11.3	20.8	1957	13.2	13.2	26.4

- * The share of the direct federal taxes for 1929-1943 has been calculated from Statistics of Income for the given years, and for 1944-1957 by dividing the sum of direct federal taxes withheld by owners from wages and given in the reports of the Department of Commerce, by the sum of wages (National Income, 1954 Ed.: U. S. Income and Output, 1958). Direct taxes (state and local) have been calculated on the basis of their ratio to direct federal taxes (from data of National Income, 1954 Ed.; U.S. Income and Output, 1958). Indirect taxes have been calculated by dividing the total sum of indirect taxes (from National Income, 1954; U.S. Income and Output, 1958) by the sum of expenditures on objects of consumption and services (from the same sources). On the one hand, indirect taxes are a much greater burden on the expenditures of poor families than on the expenditures of the well-to-do; on the other hand, a fairly considerable part of the total sum of indirect taxes is formed by taxes on immovable property (houses), which affect the well-to-do sections of the population to a comparatively greater extent. It may be assumed that these two contradictory facts compensate one another to a great extent and that, therefore, the average index thus deduced is fairly close to the genuine. This is confirmed by a number of special researches in the given field. For instance, according to Professor Musgrave (see National Tax Journal, March 1951), the sum of all federal and local taxes in 1948 amounted to 23.5% for the income group up to 1,000 dollars; 20.3% for incomes of 1,000-1,999 dollars; 21.6% for incomes of 2,000-2,999 dollars; 21.8% for incomes of 3,000-3,999 dollars; 21.7% for incomes of 4,000-4,999 dollars, and 23.1% for the income group of 5,000-7,499 dollars. These estimates wholly coincide with the figure of 20.5% given in the table for 1948, if we add to it the social insurance taxes — 1.5% — which makes 22.1% altogether.

the cost of the so-called "net national product," that is, the national income calculated on the basis of market prices of commodities and including, therefore, the sum of indirect taxes. Only these data will stand any comparison with the official data on wages, from which neither direct nor indirect taxes have been deducted, and which are given in column 2.

To the official data on the national income given in column 6 we make the following corrections:

- (1) We deduct indirect taxes, as the corrected sum of wages has been calculated with deduction of indirect taxes;
- (2) We eliminate the correction for revaluation of inventories owing to changes in prices, by means of which the Washington statisticians systematically actually underestimate the profits of corporations;
- (3) In the "national income" we also include those expenditures on new fixed capital which corporations, with the aim of concealing their profits, present in their balance

sheets under the column heading of "current expenses," and which bourgeois statisticians include in the general item of "wear and tear of fixed capital." (5) It is perfectly obvious that these expenditures are a part of accumulated profits, that is, a part of the surplus value, and therefore, a part of the national income;

(4) From the data thus obtained we deduct the so-called share of "government institutions," "households," and various "non-commercial organizations" in forming the "net national product." In other words, we take that value of the newly-created product which also includes that field of services where hired labor is exploited for profit. The data thus corrected are given in column 6 of the table.

It should be noted that the data of column 6 greatly overstate the sum of the national income, as they reflect the growth of prices under inflation. During the thirties the national income of the United States either dropped or remained at a standstill. The increase in the nominal sum of

Table V

"Apparent" Share of Workers and Employees in the National Income for 1929-1957*

Years	Official Statistics			Partly Corrected Calculations			Social product (in billion dollars in prices of 1954)***
	Compensation of employees (in million dollars)	National income (million dollars)	Share of compensation of employees in national income (%)	Compensation of employees (in million dollars)	National income (million dollars)**	Share of compensation of employees in national income (%)	
1	2	3	4	5	6	7	8
1929	51,085	95,551	53.5	36,847	78,805	46.8	159.5
1932	31,054	50,097	62.0	19,396	34,904	55.6	110.3
1937	47,934	82,280	58.3	29,661	64,431	46.0	158.2
1939	48,108	83,505	57.6	29,345	63,089	46.5	163.4
1940	52,129	91,227	57.1	32,218	70,990	45.4	177.9
1943	109,587	180,843	60.6	58,559	143,430	40.9	237.8
1944	121,286	200,706	60.4	62,461	148,531	42.1	251.2
1945	123,181	198,243	62.1	61,278	145,094	42.2	248.6
1946	117,697	197,881	59.5	69,327	162,356	42.7	244.1
1947	128,757	217,718	59.1	79,590	184,296	43.2	250.3
1948	140,969	244,802	57.6	88,334	203,514	43.4	260.4
1949	140,834	240,270	58.6	87,519	190,176	46.0	258.2
1950	154,190	266,268	57.9	94,938	220,135	43.1	281.8
1951	180,327	305,758	59.0	106,983	246,481	43.4	299.5
1952	195,012	321,618	60.6	113,147	253,483	44.6	308.7
1953	208,812	337,576	61.9	122,162	268,746	45.5	323.7
1954	207,595	333,450	62.3	122,445	263,659	46.4	317.9
1955	223,852	364,495	61.4	131,761	291,704	45.2	346.2
1956	241,799	385,468	62.7	141,009	307,535	45.9	354.1
1957	254,637	401,860	63.4	148,368	317,293	46.8	357.7

* Compiled and calculated on the basis of National Income, 1954, Ed.; U. S. Income and Output, 1958.

** The method of calculation is explained in the text below. To the figures for 1943-1945 and 1951-1957 there has been added the so-called "accelerated depreciation," the right to which was granted to big companies filling military orders, and which actually represents only a part of profits not subject to taxation, as well as the sums overstating the rate of depreciation of fixed capital during its first years of operation, established by legislation for new capital investments beginning with 1954 and representing a transfer of a part of profits to the deductions for depreciation. The data on accelerated depreciation for 1943-1945 and 1951-1955 have been calculated from National Income, 1954, Ed. and Statistics of Income; and for 1956-1957 they represent estimates based on data given in the Quarterly Financial Report for Manufacturing Corporations; the data on overstated depreciation during the first years of utilization of fixed capital have been calculated from Survey of Current Business, September 1957, p. 12.

*** The official calculation of the national income at retail prices (i.e., including indirect taxes), without the remuneration of government employees, private servants and workers of non-commercial organizations, plus the reimbursement of fixed capital. When thus calculated, the value of the social product (excluding internal turnover) still contains a double counting of a part of non-material services.

the national income during the years of the second world war and after reflects, to a considerable degree, the growth of military production and inflation of prices. Column 8 presents the official calculation of the social product of the United States (excluding internal turnover) in constant prices of 1954. It follows from these data that the growth of the national income, with the change in prices and the growth of the population of the country during the thirty years (1929-1957) taken into account, hardly amounted to an average of 1.7% per annum.

According to the falsified calculations of the official statistics, during the thirties and the forties the share of

workers and employees in the national income was allegedly marked by a tendency to increase considerably. It appears that the share of workers and employees in the national income reached its peak at the time when the second world war was at its height, in 1943-1945, when an acute shortage of goods was being experienced, and also during the period of increasingly high prices and new feverish militarization of the economy — in 1952-1957. The US official statistics arrive at this improbable conclusion by adding the expenditures on the upkeep of the multi-millioned army to the wages of workers and employees.

On the contrary, if we turn to the results of the partial

corrected calculation, we see that the data show an appreciable drop in even the "apparent" share of workers and employees in the national income of the USA. Here we should proceed from the necessity of comparing more or less similar phases of the industrial cycle, as during a period of crisis when a quite considerable part of the surplus value, directly extorted by capital during the process of production, is not sold on the market the share of workers and employees in the newly-created and realized product, that is, in the national income, is artificially overstated. Behind this deception, however, lies the increase in the hardships suffered by the proletariat. In other words, the slight increase in the "apparent" share of the wages of workers and employees in the national income during the year of acute crisis — 1932 — for instance, actually reflected merely a catastrophic reduction of the annual product and the annual national income, from which the working people suffered most.

If we take the prewar period as a whole, we find that it is marked by a drop in the "apparent" share of workers and employees in the national income from 46.8% in 1929 to 45.4% in 1940. During the years of the second world war the "apparent" share of workers and employees in the national income continued to drop rapidly (to 40.9%). In reality, the deterioration in the conditions of the working masses was more marked as the shortage of foodstuffs and

consumer goods, which is an inevitable concomitant of the war economy, caused a considerable reduction in the real consumption of the masses. As far as the postwar years are concerned, we find that as a result of the inflation and the ensuing deprivations suffered by workers and employees, their "apparent" share in the national income rose only slightly from the lowest war-time level. In 1946 the share of workers and employees in the national income was 42.7%, in 1948 — 43.4%, and in 1950 — 43.1%, as compared with 45.4% in 1940 and 46.8% in 1929. In 1949 a small apparent rise in the share of workers and employees in the national income took place. These figures, however, concealed the influence of the crisis, the curtailment of civilian production, that is, a definite increase in the impoverishment of the working people. This is also true of the indices for 1954 and, partly, for 1957.

During the past decades, the process of expropriation and proletarianization of the middle classes continued rapidly in the United States. Therefore the drop, not in the "apparent," but in the actual, share of the working people in the national income during 1929-1957 is much more marked than appears from the previous table.

By repeating the rough calculation already made for the period 1900-1929, we obtain the following results (see Table VI):

Table VI

Decline in the Share of the Working People in the National Income During the Period 1929-1957

Years	Proportion of Hired Workers (%)		How the share of workers' and employees' wages in the national income should have changed in keeping with the increase in their numbers**	"Apparent" share of workers and employees in the national income (%)***	Index of decrease of workers' and employees' share in the national income (1929=100)**	Share of initial number of workers and employees (76.2% of the gainfully-employed population) in the national income (%)**
	In the whole of the gainfully-employed population, including government employees, domestic servants, etc.*	In the gainfully-employed population excluding government employees, domestic servants, etc.*				
1	2	3	4	5	6	7
1929	79.1	76.2	46.8	46.8	100.0	46.8
1940	81.9	79.4	48.8	45.4	93.0	43.5
1948	83.7	81.0	49.7	43.4	87.3	40.9
1953	85.3	82.0	50.4	45.5	90.3	42.3
1956	85.9	82.7	50.8	45.9	90.4	42.3
1957	86.1	82.9	50.9	46.8	91.9	43.0

* Calculations made on the basis of data on employment given in the official calculations of the national income (National Income, 1954 Ed.; U.S. Income and Output, 1958) and data of the Census Bureau on the total number of the gainfully-employed population. Owing to difference of sources, the figure for 1929 given in column 2 differs slightly from the corresponding figure given in Table II. In column 2, hired workers include government employees, etc., while in column 3 they are excluded.

** See footnotes **, ****, ***** beneath Table II. Column 4 is calculated on the basis of column 3.

*** See column 7 of the preceding table.

From Table VI it appears that the share of the national income accruing to one and the same part of the whole of the gainfully-employed population, consisting of workers and employees (76.2%), dropped from 46.8% in 1929 to 43.5% in 1940, and 42.3% in 1956. (6) We may proceed from the fact that 6.5% of the gainfully-employed population, proletarianized during the period under review, in 1929 disposed of

approximately 6.7% of the national income. (7) Hence, the share in the national income of the hired workers and the population subjected to proletarianization amounted to approximately 53.5% in 1929, while in 1956 it had dropped to 45.9%.

Thus, during 1900-1929 the share of the proletariat and the proletarianized part of the population (79.7%) in the

national income dropped from 59% to 53.2%, while with regard to the period 1929-1956 more precise calculations show a drop in the share of the proletariat and proletarianized part of the population (82.7%) in the national income

from 53.5% to 45.9%. If, on the basis of the existing data, we combine these two series into one, then on the basis of the latter, as closest to reality, we may compile the following table:

Table VII

Share of Proletarian and Proletarianized Part of Population (82.7%) in the National Income During the Period 1900-1956 (%)*

1900	1910	1920	1929	1940	1948	1953	1956
59.7	54.3	55.0	53.5	48.8	45.1	46.2	45.9

* The data on the share of the 79.7% of the population in the national income for the period 1900-1929 have been combined with the data on the share of the 82.7% of the population in the national income for the period 1929-1956 by:

- (1) converting the results obtained to the level of the corresponding calculation for 1929-1956, and,
- (2) calculating the share in the national income of the proletarianized section of the population (representing the difference between the proportion of workers and employees in the total number of the gainfully-employed population for 1900, 1910 and 1920 and the figure of 82.7% of the gainfully-employed population) on the basis of the data given by King in The Wealth of the People of the United States (for the method of this calculation see above).

Although these calculations do not eliminate all the incorrect methods of calculating the national income and its distribution among classes which are resorted to by bourgeois economists and statisticians, they differ sharply from the summary results given in American bourgeois publications which draw a thoroughly false picture of the overstated share of workers and employees in the national income. S. Kuznets particularly excels in such apologetic interpretations, for, completely ignoring the historical process of the further proletarianization of the American population, he presents the sham, apparent growth in the share of the wages of workers and employees in the national income as a fact. (8) From our calculations we can state that in the course of the first half of the twentieth century the share of approximately 83% of the gainfully-employed population of the USA, i.e., the workers and employees and the proletarianized sections of the population, in the national income, steadily dropped: it decreased from 59.7% to 45.9%, or almost by one-fourth. In reality, however, the decrease of this share was undoubtedly still more considerable.

(3) Comparison of Dynamics of Incomes of Different Classes and Social Groups

The results obtained, even when purged of all the crude apologetic trash, still contain quite a number of elements concealing the relative impoverishment of the proletarian masses. The attempt to differentiate still more the dynamics of the national income and the share of the different classes in it reveals a still wider gulf between the deprivations of the proletarian masses and the growth of the wealth of big capitalists. This is shown by Table VIII (on the following page), in which the change in the chief income categories of the different classes or large social groups is reflected.

Table VIII is not free from shortcomings connected with the utilization of the official bourgeois statistical data, even

in revised form. Nevertheless, it gives a sufficiently clear picture of the progressive relative impoverishment of the American proletariat during the past thirty years. In the first place, let us turn to the column of compensation of workers and employees and the column of profits of corporations (prior to payment of taxes). Only during the period of depression and slight revival (in 1937 and 1939), did the nominal sum of corporation profits, compared to 1929, seem to drop more than the combined wages of workers and employees. This fact, however, is by no means an index of a relative improvement in the situation of the working masses. On the contrary, it only proves the impossibility of fully realizing the surplus value extorted in the process of production, in other words, a decrease in the volume of production and a tremendous growth of unemployment, and, hence, a serious deterioration in the conditions of the working class during that period.

During the second world war a golden shower of military orders began to artificially revive the American economy. The growth in profits of the monopolies sharply outstripped the increase in the total nominal wages of workers and employees. In 1943, when military production reached its peak, the total nominal wages of workers and employees increased by 84% as compared to 1929, and the profits of corporations — by 155%, i.e., almost double. In the following years, the profits of corporations considerably outstripped the growth of total nominal wages of workers and employees. In 1948, for instance, total wages exceeded the nominal level for 1929 by 166%, and the profits by 243%; in 1953 by 278% and 298% respectively; and in 1956 by 332% and 373% respectively. Only during the years of crisis or the beginning of a crisis (1949, 1954, 1957) is the nominal growth of the sum of profits of corporations less than the growth in combined nominal wages, owing to the impossibility of realizing a part of the surplus value extorted in the process of production.

If, on the other hand, we examine the movement of the wages of workers and employees (including allowances and

Table VIII

Dynamics of Incomes of Different Classes and Social Strata in the Period 1929-1957*

Years	Compensation of Employees		With deduction of direct and indirect taxes and addition of allowances**	Profits of corporations (before taxation)	Salaries of high executives of corporations	Indirect taxes	Income of unincorporated enterprises	Farmers' incomes						
	Nominal													
	million dollars	index	million dollars	index	million dollars	index	million dollars	index	million dollars	index				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1929	40,040	100	36,847	100	9,628	100	3,337	100	7,003	100	8,649	100	6,142	100
1937	34,394	86	29,661	80	6,235	65	2,809	84	9,157	131	7,102	82	6,048	98
1939	33,679	84	29,345	80	6,403	67	2,697	81	9,365	134	7,459	86	4,489	73
1940	36,982	92	32,218	87	9,320	97	2,950	88	10,021	143	8,487	98	4,570	74
1943	73,671	184	58,599	159	24,554	257	3,745	112	12,735	182	16,979	196	11,822	192
1944	77,877	194	62,461	170	23,320	242	3,759	113	14,127	202	18,109	209	11,807	192
1945	76,019	190	61,278	166	18,977	197	4,118	124	15,522	222	19,117	221	12,411	202
1947	96,364	241	79,590	216	29,525	307	6,026	183	18,641	266	21,419	248	15,544	253
1948	106,461	266	88,334	240	33,000	343	6,733	202	20,405	291	22,815	264	17,789	290
1949	103,781	259	87,519	238	26,370	274	6,743	202	21,637	309	22,194	257	12,926	210
1950	112,850	282	94,938	258	40,628	421	7,607	228	23,747	339	24,635	285	14,000	228
1951	130,021	325	106,983	290	42,153	438	8,122	243	25,647	366	26,322	304	16,334	266
1952	139,932	349	113,147	307	36,691	381	8,338	250	28,140	402	26,695	309	15,337	250
1953	151,540	372	122,162	332	38,311	398	8,676	260	30,203	431	27,613	319	13,278	216
1954	148,791	378	122,445	332	34,061	354	9,006	270	30,151	431	27,800	321	12,691	207
1955	159,912	399	131,761	358	44,862	466	10,356	310	32,865	469	30,580	354	11,767	192
1956	173,041	432	141,009	383	45,493	473	11,000***	330	35,631	509	31,300	362	11,632	189
1957	180,831	452	148,368	403	43,426	451	11,600***	348	37,644	538	31,700	367	11,598	189

* Compiled from the same sources as Table V. Column 2 covers same categories of workers and employees as column 5 in Table V, but direct and indirect taxes, etc., are not excluded.

** In addition to direct and indirect taxes, social insurance taxes are deducted; social insurance allowances, compensation for injuries, and pensions under collective agreements have been added (see explanation to column 5, Table V).

*** Preliminary estimate.

pensions) after deducting direct and indirect taxes which are a part of the social surplus value, then the lag of the nominal incomes of workers and employees behind the growth of the mass of surplus value extorted in one way or another by the big capitalists will prove to be more considerable. In 1953 as compared with 1929, for instance, the increase in the former equalled 232%, and the increase in the latter 298%, while in 1956 it was respectively 283% against 373%.

Among all the income categories represented in the table, the profits of corporations grew most rapidly. Indirect taxes rose still more rapidly, i.e., were actually another part of the surplus product extracted in a roundabout way from the real incomes of the proletariat. The sum of indirect taxes grew more rapidly than combined nominal wages, which means that the share of workers and employees in the national income decreased still more than is shown by the already very considerable lag of wages behind the swift growth of the mass of profits of corporations.

The sum of the salaries of high executives of corporations increased by a relatively smaller extent. This fact actually only testifies to the ever greater concentration and centralization of monopoly capital. The individual salaries of the high executives of corporations undoubtedly increased in the same way as the profits of corporations, but because an ever smaller number of directors and managers remain at the head of the capitalist companies, the total sum of their remuneration has not increased relatively.

What do we learn from columns 12 and 14 of this table, which reflect changes in the incomes of unincorporated enterprises in industry, building, trade, services, etc., as well as in agriculture?

During the period 1947-1956 as compared to 1929, the

nominal sum of the incomes of unincorporated enterprises in all branches except agriculture even lagged increasingly behind the movement of total nominal wages of workers and employees (increase for 1929-1956 — 262% as against 332% respectively), and to a still greater extent behind the growth of profits of corporations (373%). Here the process of the further expropriation of the petty bourgeoisie by the big monopolies is graphically clear. Moreover, we must take into account the fact that the figures on the profits of corporations, together with the big and middle private owners whose incomes increased relatively more rapidly, also include the figures on the broad masses of small owners. If it were possible to separate the incomes of the owners of small enterprises, small tradesmen, the majority of the members of the free professions, etc., we would, no doubt, find that their incomes lagged to a still greater extent.

The same may be said with regard to the overwhelming majority of the farmers. The official American statistics include in the column headed "incomes of farmers" both the profits of the big capitalist landlords as well as the miserable "incomes" from farming earned by the overwhelming majority of small and middle farmers who barely manage to make both ends meet. It is noteworthy, however, that even this "aggregate" net income of farmers lagged considerably behind the growth of the profits of corporations (in 1956, as compared to 1929, the nominal growth was 89% as against 373%), in spite of the great inflation of prices of agricultural products during the years of the second world war and the postwar period. If, however, we were to separate the incomes of the basic mass of small and middle farmers, then we would find that their relative decrease, as compared to the profits of corporations (chiefly the profits of the big monopolies), was far greater.

Table IX

Changes in Incomes of Different Class Groups in Agriculture During 1929-1957*

Years	Net income					Farm wages	
	All farmers (million dollars)	Capitalist farmers		Small and middle farmers		million dollars	Index (1929=100)
		million dollars	index (1929=100)	million dollars	index (1929=100)		
1	2	3	4	5	6	7	8
1929	6,142	2,224	100	3,918	100	1,287	100
1939	4,489	1,871	84	2,618	67	988	77
1944	11,807	7,070	318	4,737	121	2,202	171
1949	12,926	8,522	383	4,404	112	2,865	223
1954	12,691	9,171	412	3,520	90	2,699	210
1957**	11,598	8,647	389	2,951	75	2,838	221

* The net income of small and middle farmers has been calculated on the basis of the share of small and middle farms in gross output (from the Agricultural Census). Small and middle farms include the following (with change in price level taken into account): 1929 — gross output up to 4,000 dollars; 1939 — up to 3,000 dollars; 1944 — up to 4,500 dollars; 1949 and 1954 — up to 6,000 dollars. The distribution of the gross output among the groups of farms for 1949 and 1954 has been calculated on the basis of the data of appropriate censuses of marketable produce, data of the 1954 Census on distribution of marketable and gross output among groups of farms, and also data on the changed share of non-marketable produce in gross output of all farms (Agricultural Statistics, 1957). On the basis of the indices of the shares of small and middle farms in gross output and the data on the national income produced on the farms, the net farms have been deducted from the net product. The distribution of the total sum of wages among the indicated groups of farms has been deducted from data of agricultural censuses.

** Data for 1957 represent extrapolation.

As we see from Table IX, there is a profound gulf between the change in the nominal sum of the incomes of the basic semi-proletarian mass of farmers and the growth in the profits of the big capitalist landlords (farmers).

By 1957, the nominal sum of net income of the small and middle farmers dropped below the 1929 level by 25% while there was a simultaneous 82% rise in prices of the articles of consumption bought by the farmers. In other words, the sum of real incomes of the small and middle farmers decreased by 59%, with a decrease in their numbers of approximately only 27%. The profits of the capitalist farmers, on the other hand, exceeded the 1929 level by 289%. As presented by bourgeois statisticians, however, this looks like an increase of 89% in the "total" nominal sum of incomes of "all" farmers. As for the nominal wages of agricultural workers and employees, in 1957 these exceeded the 1929 level by only 121%, as compared with an increase of 89% in the total sum of profits of the big capitalist farms.

(4) Distribution of the Total Sum of Private Incomes

Instead of analyses of the change in the share of different classes in the national income, bourgeois economists prefer data on the distribution of the total sum of private incomes among the groups of the population merely in accord with their places in the hierarchy of private incomes. We can

of course utilize this type of data as an additional proof of the process of relative impoverishment of the proletariat, although, as will be shown below, such data give bourgeois economists particularly favorable opportunities for coloring the truth. Calculations of this type are based, after all, on tax statistics which, however, show only a masterly ability on the part of the rich to avoid more and more the payment of established rates of taxes.

When comparing the figures of the national income calculated by the Department of Commerce with the results of the statistics on taxation, even the calculations of the government economists show that in 1946 the understatement of the sum of workers' and employees' wages, according to data of the tax agencies, amounted to 5%, the incomes of unincorporated enterprises to 30%, the incomes from interest to 66%, from dividends to 20%, from rent to 50%. In 1952, this understatement equalled 4%, 28%, 64%, 15% and 41% respectively. (9)

The underestimation by tax statistics of the private incomes of the rich (incomes from enterprises, interest, dividends and rent) reaches such magnitudes that the calculation of the change in the share of the small section of the population (one or five percent) with the highest incomes, which is based only on the data of tax statistics, remains in mid-air.

Insofar as wages are the chief form of income of the

Table X

Share of Lower-Income Categories of Families and Single Persons in the Sum of Private Incomes for 1910-1957 (%)*

Years	Lower-paid categories of families and single persons							
	lowest 10%	second 10%	third 10%	fourth 10%	fifth 10%	sixth 10%	lowest 40%	lowest 60%
<u>Calculations of National Industrial Conference Board</u>								
1910	3.4	4.9	5.5	6.0	7.0	8.0	19.8	34.8
1918	2.4	4.4	5.7	6.9	7.2	7.7	19.4	34.3
1921	2.0	3.2	4.6	5.9	6.5	7.4	15.7	29.6
1929	1.8	3.6	4.6	5.5	6.5	7.9	15.5	29.9
1934	2.1	3.8	5.3	6.2	7.3	8.2	17.4	32.9
1937	1.0	2.6	4.4	6.0	7.2	8.5	14.0	29.7
<u>From questionnaires of Federal Reserve Board</u>								
1947	1.0	3.0	4.0	6.0	7.0	9.0	14.0	30.0
1950	1.0	3.0	5.0	6.0	8.0	9.0	15.0	32.0
1953	1.0	3.0	5.0	6.0	8.0	9.0	15.0	32.0
1955	1.0	3.0	4.0	6.0	8.0	9.0	14.0	31.0
1956	1.0	3.0	5.0	6.0	8.0	9.0	15.0	32.0
1957	1.0	3.0	4.0	6.0	8.0	9.0	14.0	31.0
<u>Calculations of Department of Commerce</u>								
1944	4.9**		10.9**		16.2**		15.8	32.0
1947	5.0		11.0		16.0		16.0	32.0
1950	4.8		10.9		16.1		15.7	31.8
1953	4.9		11.3		16.6		16.2	32.8
1956	5.0		11.3		16.5		16.3	32.8

* Compiled from National Industrial Conference Board, *Enterprise and Social Progress*, 1939, p. 125; Federal Reserve Bulletin; *U. S. Income and Output*, 1958, p. 161.

** Data for groups including 20% of families and single persons.

basic, proletarian mass of the population, and, as the underestimation of wages even according to tax statistics is very limited, elementary logic tells us that an incomparably more reliable method of determining changes in the magnitude of the gap between incomes is to analyze the change in the share of the total sum of incomes, not of the small top-income group of the population, but of the broad sections of the population with the lowest incomes. However, S. Kuznets and many other US economists entirely ignore this possibility. And this is no accident. A comparison of the available calculations of the distribution of the sum of private incomes between equal percentages of families and single persons yields the results shown in Table X (see preceding page).

The three sets of data given in Table X differ both in the criteria used in determining incomes and in the nature of the statistics on which they are based. The figures for 1910-1937 cover, as a rule, all categories of families and single persons, as well as all private incomes — monetary and in kind. The data of the Federal Reserve Board do not include families and single persons residing in hotels, furnished rooms, etc. (chiefly lower-paid categories), and include only monetary incomes. Finally, the figures of the Department of Commerce theoretically cover all categories of families and single persons, as well as all private incomes — monetary and in kind. Thus, the figures for 1910-1957 were compiled at different times by different authors, using different methods, on the basis of the data available for each given period on the distribution of wages, as well as the reports of tax statistics.

In spite of these differences, the above data on the distribution of the total sum of private incomes among the lower-income categories of families and single persons on the whole reveal an amazing resemblance in magnitude and constancy in trends, which is their best check. The most general conclusion that is suggested from their examination is that the share of the 40% of lower-income categories of families and single persons in the total sum of private incomes dropped from 19.8% in 1910 to 15.5% in 1929 and 14% in 1937, and then, during the period 1947-1957, amounted to 14-16%. The share of the 60% of lower-income categories of families and single persons also dropped correspondingly from 34.8% to 29.9% and 29.7%, and during the period 1947-1957 equalled 31-32.8%. As for the lowest-paid 10% of families and single persons, their share in the total sum of private incomes dropped catastrophically — from 3.4% in 1910 to 1% in the fifties, and the share of the next 10% of families and single persons from 4.9% to 3%. These figures clearly show, without further comment, the considerable increase in the gap between the incomes of the rich and poor in capitalist America during the past half century, and how the process of relative impoverishment, moreover, has affected most the poorest sections of the proletarian population.

Did the fall in the share of the basic mass of lower-paid families and single persons (60%) really stop, and even give way to a slight improvement in the period following the second world war? In particular, did the share of the 60% of the lower-paid families and single persons in the total sum of private incomes really remain unchanged during the whole of the postwar period — from 1947 to 1957 — without any further decline? Neither the one nor the other is true; neither the one nor the other is compatible with the drop in the share of 82.7% of the proletarian and proletarianized population in the national income from 55% in 1920 and 53.5% in 1929 to 48.8% in 1940, 46.2% in 1953, and 45.9% in 1956, which were derived above from the calculations of the national income. Why is this so? Because the methods of

compiling data on the distribution of the sum of private incomes among the different categories of families and single persons permitted the true state of affairs to be considerably colored.

First of all, let us take the fact that net incomes from the sales of property and securities were included in the calculations for 1910-1937, but not in the computations for the postwar period. However, if for the sake of ensuring comparability of indices we also exclude these incomes, which almost wholly fall to the share of the most well-to-do sections, from the data for 1910-1937, then the share of the basic mass (60%) of the lower-income categories of families and single persons in the total sum of private incomes rises, for instance, for 1929 from 29.9% to 31.9%. (10) Thus, the very semblance of its subsequent slight rise during 1947-1957 disappears.

Secondly, the data on the distribution of the total sum of private incomes among the different categories of families and single persons do not include the undistributed profits of the corporations. As a result, the full amount of the share of the big bourgeoisie in the national income is considerably understated. Besides, the share of the undistributed profits of corporations in the total sum of dividends, interest, rent and profits of private, non-agricultural owners sharply increased from 9.4% in 1929 to 16% in 1953 and 16.8% in 1956. (11) A part of the accumulated profits, which in 1929 was counted as the private income of big capitalists and, therefore, included in the calculations of private incomes, was converted in the postwar period into the undistributed profits of corporations and excluded from the calculations. Owing to this, the dynamics of the share of the richest sections of the population in the total sum of private incomes was distorted in the direction of understatement, and the share of the basic mass of lower-paid categories of families and private persons was overstated.

Thirdly, in the postwar period there appeared the right to accelerated depreciation of capital investments of military significance, and also to overstatement of the rate of depreciation of new fixed capital in the first period of its operation, beginning with 1954, which actually meant transference of a part of profits to depreciation deductions. But again this is equivalent to excluding from the calculations for recent years a part of the profits of capitalists which in 1929 was included in the given calculation.

Fourthly, owing to the sharply increased rate of taxation of profits of corporations during the war and in the postwar period, the concealment of profits assumed a still larger scale. A considerable part of the private expenditures of the directors of the big corporations, who are actually big capitalists, began to be paid under the guise of "business expenses" of the firm. This includes motor-cars, yachts, airplanes and country houses placed at the private disposal of the directors of big corporations and their families, payment of their bills at restaurants, night-clubs, sport clubs, tickets for theatres and other places of amusement, expensive tourist trips, etc. (12) Another method consists of handing out additional shares to the directors of corporations instead of raising their "wages." Finally, the possibility exists of legally presenting the most ordinary profit as income from the sale of property and securities. In all these cases, a part of the profits of big capitalists is left out of not only the calculation of the distribution of the sum of private incomes among the different categories of families and single persons, but also out of the summary calculation of the national income, and therefore its exact amount cannot be established.

A quantitative estimate can only be made of the increase in the share of undistributed profits of corporations and the

overstatement of the depreciation deductions. According to the latest calculations of the national income, in 1929 the sum of undistributed profits amounted to 2,446 million dollars, or 2.82% of the total sum of private incomes (with deduction of incomes from the sale of property) distributed among the different categories of families and single persons (86,752 million dollars), (13) and in 1956 to 3.53% (11,033 million dollars out of 312,255 million dollars). (14) Thus, for a full comparability of indices we must add 0.71% of the total sum of private incomes, or 2,217 million dollars, to the sum of private incomes of the top-income groups for 1956. We must also add to it the sum of overstated depreciation for the same year, amounting to 3,790 million dollars. As a result, the share of the basic mass (60%) of the lower-income groups in the total sum of private incomes amounted to 32.2% in 1956 as against 31.9% in 1929. If it were also possible to take into account the considerable additional concealment of profits by the big capitalists by swelling the "business expenses" of companies, issuing additional shares, and conversion of ordinary profits into income from the sale of property, then a further drop of the share of the basic mass (60%) of the lower-income groups in the total sum of private incomes would become quite obvious.

In determining the dynamics of the share of the basic mass of lower-paid categories of families and single persons for a more extended period we must also take into account the changed ratio of the number of families and number of single persons. According to the calculations for 1910, the number of single persons in this group amounted to 34.6% of the total number of families and single persons, according to the calculation for 1929 — 24.7%, and for 1956 — only 17.9%. (15) However, as the proportion of lower-paid workers and employees is much higher among single persons than among families (in 1956, for instance, 29.4% of the total number of families and 80.4% of all single persons had annual incomes of under 4,000 dollars), the reduced proportion of single persons, with all other conditions being equal, results in artificial overstatement of the share of the basic mass of families and single persons belonging to the lower-paid categories. Owing to this, the decline in the share of the 60% of the lower-paid families and single persons in the total sum of private incomes during 1910 to 1929 and then to 1956 was actually greater than follows from the above data. And if in the recently published official statement on the national income the economists of the US Department of Commerce compare the data on the distribution of the total sum of private incomes among groups of families and single persons in 1929 and 1956 without correction for the changed proportion of single persons, they only prove that they do not disdain to use any means in their apologetic coloring of the truth.

In the same publication the economists of the US Department of Commerce, developing S. Kuznets' thought, published the results of new calculations according to which the share of the 5% of top-income families and single persons in the total sum of private incomes allegedly dropped from 30% in 1929 to 20.1% in 1956. (16) The misrepresentation of these figures is due not only to the use of the above-mentioned corrupt methods of calculating the sum of private incomes of families and single persons, but also to a different fact, i.e., a considerable extension of the practice of "splitting" the big incomes liable to taxation. Things went so far that in 1948 the US Congress legislatively sanctioned the "splitting" of family incomes between husband and wife in order to lower the actual rate of taxation. Since 1948 the method of "splitting" family incomes among husband, wife, children and relatives has become more and

more widespread. As a result, an annual family income of 100,000 dollars, according to the statistical tax data, may appear as four annual incomes of 25,000 dollars each, or as two annual incomes of 30,000 dollars each and two of 20,000 each, etc. The statistical possibilities of "deducing" from the individual tax reports the family income of big capitalists who display particular skill in camouflaging their incomes are very limited. And since the calculation of the share of the 5% of top-income families and single persons in the sum total of private incomes is wholly based on the data presented by the tax statistics, it is perfectly obvious that this calculation lacks all reliability.

Thus, the data which the authors of the theory of a "revolution in incomes" speculate in merely reflect the tax manipulations of big capitalists.

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(1) S. Kuznets, Share of Upper Income Groups in Income and Savings, NBER, New York, 1953, p. 637.

(2) A. E. Burns, Looking Forward, NBER, New York, 1954, pp. 3-4. (This citation and others that follow have been retranslated from the Russian — Ed.)

(3) Let us assume, for instance, that the mass of hired workers at a definite moment equals 70% of the gainfully-employed population of the country, and its share in the national income equals 45%. On the expiration of a certain interval, however, as a result of proletarianization of new sections of the urban and rural population, the percentage of hired workers increased to 77%, while the share of the whole of the proletarian masses in the national income equalled 46%. On the surface, it would seem that the share of the proletariat in the national income had risen from 45% to 46%. In reality, however, the newly proletarianized sections of the working people, representing 7% of the gainfully-employed population, in the initial year disposed of about 5% of the national income and, hence, the share of the proletariat and of the masses of the population on the verge of proletarianization at that time amounted to 50% of the national income (45% plus 5%). Now, however, it has dropped to 46%, and if we assume, moreover, that the sections of the population ruined and proletarianized during this period of time receive only 3.8% of the national income, then only 42.2% of the national income falls to the share of the former mass of factory and office workers, representing one and the same part of the gainfully-employed population (70%), as against 45% in the original year.

(4) The following indices are taken from King's calculations published in the book The Wealth and Income of the People of the United States, pp. 228-229.

(5) The official explanations read: "The column of capital expenditures made on account of current expenses reflects the new elements of the fixed capital included in the column 'private investments' made by companies under the item of current expenses instead of referring them to expenditures on expansion of capital." (Survey of Current Business, July 1947, p. 10).

(6) The figure for 1957 is not characteristic owing to the beginning of the crisis during the last months of the year, and the reduced possibilities for realizing the surplus value extracted during the process of production.

(7) This is a minimal estimate, as even by the calculations of American bourgeois economists, in 1929 38.9% of the national income fell to the share of 70% of the families with the lowest incomes, 48.7% to the share of 80% of the families, and 61% to the share of 90% of the families.

(Historical Statistics of the United States, 1789-1945, p. 15). In other words, 10% of the gainfully-employed population representing the upper strata of hired workers, and the "middle classes," following them, disposed of approximately 9.8% of the national income, and the following 10% — of approximately 12.3%. The "middle classes" subjected to proletarianization and forming 6.5% of the gainfully-employed population on the borderline of the above-mentioned groups disposed of at least 6.7% of the national income.

(8) In his book *National Income: A Summary Finding*, published in 1946, Kuznets combines the calculations of King, Martin, and his own in a summary table on the change in the distribution of the national income among classes in the course of seventy years (page 50). From this table, in which the data of different authors is statistically combined on the basis of King's own earlier calculations, it appears that the share of workers and employees in the national income from 1880-1890 to 1900-1910 dropped from 52.5% to 47.1%, and subsequently — from 1899-1908 to 1929-1938 — it rose from 47.1% to 54.2%. When combining the same data on the basis of Kuznets' calculations for the twenties and thirties, it appears that the share of workers and employees in the national income in the former period dropped from 62.9% to 56.4%, and during the second period again rose from 56.4% to 64.9%. However you turn these figures, based on the inclusion of the salaries of high executives of corporations in the wages of workers and employees and on other similar methods, no rise in the share of workers and employees in the national income is obtained, for, if we take into account that from 1900 to 1940 the percentage of workers and employees in the gainfully-employed population rose approximately from 69.2% to 82.5%, then from the first decade of the century to the fourth the share of one and the same relative number of workers and employees in the national income — even according to the distorted calculations of Kuznets and his companions in apologizing for capital — continued to drop from 47.1% to 45.4% (according to the first combination), or from 56.4% to 54.4% (according to the second combination). But, perhaps, the approach of Kuznets and his like to the statistics of national income cannot be separated from the fact that the board of the scientific institute (National Bureau of Economic Research) which published his book is headed by the directors of the United States' biggest banks and monopolies belonging to the House of Morgan.

(9) See S. Goldsmith, *The Relation of Census Income Distribution Statistics to Other Income Data. Studies in Income and Wealth*, Vol. 23, NBER, New York, 1958, pp. 79-80.

(10) The total sum of private incomes, including income from the sale of property, included in the calculations of the Brookings Institution amounts to 92,950 million dollars (see M. Leven, H. Moulton and C. Warburton, *op. cit.*, p. 230), and the sum of income from the sale of property to 6,982 million dollars, of which only 167 million dollars fell to the share of the 60% of the lower-income categories of families and single persons (with an annual income of approximately 2,000 dollars; see S. Kuznets, *op. cit.*, p. 220). Finally, the sum of losses on the sale of property equalled 784 million dollars. Thus, the total sum of private incomes excluding incomes from the sale of property amounts to 86,752 million dollars ($92,950 - 6,982 + 784$), and the sum of private incomes of 60% of the lower-income categories of families and single persons equals 27,625 million dollars ($27,792 - 167$).

(11) Calculated from *U.S. Income and Output*, 1958, p. 127.

(12) An eloquent description of the method of charging the private expenditures of the directors of big companies as "business expenses" was even given by such a journal of the business circles as *Business Week* (July 16, 1955, p. 45).

(13) See footnote 10.

(14) *U.S. Income and Output*, 1958, pp. 127-161.

(15) Calculated from W. King, *op. cit.*, pp. 224-226; M. Leven, H. Moulton and C. Warburton, *op. cit.*, p. 227; *U.S. Income and Output*, 1958, p. 161.

(16) See *U.S. Income and Output*, 1958, p. 44. The data presented by the economists of the Department of Commerce show the smaller share of 60% of the lower-paid categories of families and single persons in the total sum of private incomes for 1929 and, hence, more favorable dynamics for the postwar period than follows from the computation of even so reactionary a scientific organization of big manufacturers as the National Industrial Conference Board (see Table X). Moreover, owing to forgetfulness or some other cause the official publication does not quote the extremely important note of the author of the recalculation for 1929 to the effect that "a detailed recalculation of the data for 1929 for the purpose of ensuring better comparability with the data for later years (in particular with regard to methods of deducing family incomes from individual tax reports, and also the estimate of understatement of incomes in the tax statistics) could have led to considerably different results" (S. Goldsmith, *op. cit.*, pp. 96-97).

Thus, obviously doubtful data is presented as an innovation in economic thought, and the magazine *America* (No. 33) propagates it in all seriousness.

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